GEA Farm Technologies

DairyManagementSystem 21 ”DairyPlan C21” (Version 5.2)

Installation and commissioning

Instruction Manual / Installation Instructions / Parts List
7160-9001-531
01-2011

GEA Farm Technologies - The right choice.

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1 Preface

1.1 Information on the instructions

These instructions are supplied with the product.

- They are designed modular and are only in relation to the mentioned product.
  For details of the components which are relevant to the product, please refer to the appropriate manuals.
  This applies especially for safety information!
- They should be kept close at hand and remain with the equipment even if the equipment is sold.
- This manual is not subject to an amendment service. The most recent version at any time can be obtained through the technical dealer or directly from the manufacturer.

The manufacturer reserves the right to make changes due to technical developments in the data and images given in this manual.

Reproductions, translations and copies of any kind, even of extracts, require written authorization from the manufacturer.

Abbreviations, units, specialist terms, special names or specialist terminology are explained in more detail in the ”Appendix”.

Pictograms used

This pictogram indicates information that will help towards a better understanding of the working processes.

A correction bar in the margin indicates changes to the previous edition.

This pictogram refers to another document or chapter.

If a manual number is given, the middle 4 figures indicate the language, as follows:

	Language		**Language**		**Language**
-9000-	German	-9013-	Dutch	-9032-	Serbian
-9001-	English (Great Britain)	-9015-	English (America)	-9034-	Slovakian
-9002-	French (France)	-9016-	Polish	-9036-	Lithuanian
-9003-	Italian	-9021-	Danish	-9038-	Portuguese (Brazil)
-9004-	Romanian	-9022-	Hungarian	-9039-	French (Canada)
-9005-	Spanish	-9023-	Czech	-9040-	Latvian
-9007-	Swedish	-9024-	Finnish	-9041-	Estonian
-9008-	Norwegian	-9025-	Croatian	-9043-	Spanish (North America)
-9009-	Russian	-9027-	Bulgarian		
-9010-	Greek	-9029-	Slovene		
Possibly not all above-mentioned languages are available.					

1.2 Manufacturer's address

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Siemensstraße 25-27
D-59199 Bönen

☎ +49 (0) 2383 / 93-70
🖷 +49 (0) 2383 / 93-80
✉ contact@gea-farmtechnologies.com
@ www.gea-farmtechnologies.com

1.3 Customer service

Authorised Technical Dealer

If necessary, please contact your nearest authorised technical dealer.

There is a comprehensive dealer Internet search function on our website at the following address:

- www.gea-farmtechnologies.com

European Contact Information:

GEA Farm Technologies GmbH
Siemensstraße 25-27
D-59199 Bönen

☎ +49 (0) 2383 / 93-70
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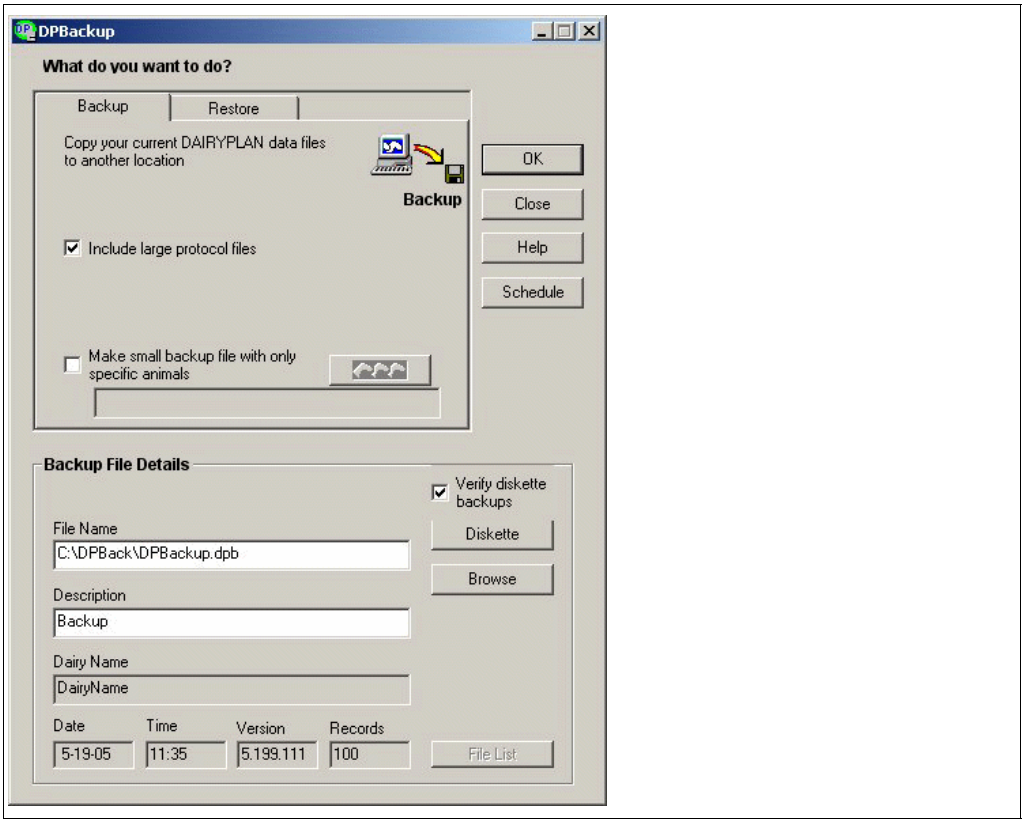
🖷 +1 630 369 - 9875
✉ contact_us@gea-farmtechnologies.com
@ www.gea-farmtechnologies.com

2 Safety

2.1 Backing up data with DPBackup

Attention!
Loss of the whole data base.
Data records on the computer hard disk or on the back-up media can get damaged and become unreadable.
So save the data on different data carriers. It is best to backup the data every day!

Data is to be saved after and before amendments are carried out.
In general, backups should be made at regular intervals and stored in a safe place.



For more information on this subject see section on DairyPlan programs; DPBackup

2.2 Owner's obligation of care

Notes for the owner

Working with DairyPlan requires a basic knowledge of computers with the WINDOWS operating system.
To fully understand and make full use of the benefits offered by the DairyPlan system, the user must be familiar with the process of milk production.
Such knowledge cannot be provided by these instructions.

The owner is responsible for ensuring that all safety instructions are followed and that this software is used in accordance with the intended purpose.

He must make sure that every user knows how to use the software/computer and can operate them safely.

Only use computers which are in perfect working condition.

Make sure that only "authorized personnel" have access to the computer.

In particular, the owner must ensure that

- Anyone who is involved in the operation, maintenance, inspection or handling of this product in any other way reads and understands this manual (especially the safety information and warnings).
- A full set of legible instructions is always kept by the product.
- Anyone who has to carry out work on the product can look at the instructions at any time.
- The instructions in the section entitled "Basic safety instructions" are observed.
- The legal requirements are observed.
- The work to be carried out is performed by a sufficiently qualified person!

Attention!
Particular qualifications are described in the corresponding chapters!

Work which may only be performed by authorized personnel:

- Installation
- Commissioning
- Troubleshooting
- Deinstallation

- These personnel are regularly instructed in all relevant matters of safety at work and protection of the environment and be familiar with the manual, particularly the safety instructions it contains.
- Operating personnel who require training only work on the product under the supervision of an experienced person. The successful completion of training is to be confirmed in writing.
- Operating instructions are produced for the farm. These must be especially adapted to the conditions of the business, once again, expressly taking account of safety aspects.

2.3 Explanation of the safety symbols used

Safety symbols draw attention to the importance of the adjacent text.

Safety symbols and signaling word

DANGER!
The word ”Danger” together with a symbol signals a danger to people’s and/ or animals‘ lives and health.

Attention!
The word ”Attention” together with a symbol signals a danger for product, material or the environment.

2.4 Basic safety instructions

DANGER!
There are warnings about specific residual dangers in the corresponding chapters.

Attention!
If the work requires special qualifications, these are described in the corresponding chapters!

- When working with products from other manufacturers always observe the warnings from the safety data sheets and operating instructions from the product manufacturer!
- Disconnect electrical installations or equipment before working on them. Lock any main or emergency stop switches to prevent them from being switched on again and put up a warning sign.
- Note that electronic components can be destroyed by electrostatic processes.
- Work should only be carried out on the installation when it is disconnected from the power supply.
- ”Unnecessary software and hardware (games, Internet, ...) puts an extra load on the computer.
  In the worst case this may cause the computer to crash resulting in data loss.

2.5 Personnel qualification

Anyone who performs work or activities relating to the Magnum 90 Autorotor must carefully read the manual and sign to confirm that they have understood it and will be act accordingly!

- Participation in corresponding product training is necessary.

3 Description

For further information on the subject, see the manual 7160-90 . . -530

3.1 DairyPlan

DairyPlan is a herd management program for the comprehensive management, analysis and monitoring of a herd from the point of view of:

- Income from milk
- Feeding
- Assessing
- Insemination / Pregnancy

For further information on the subject, see the manual 7160-90 . . -530

DairyPlan can be operated with one or more PCs (network)..

Structure of the program

DairyPlan has a modular structure.
This means that the program can be expanded according to the farmer's requirements.

If, for example, a milking installation is expanded with a milk metering system, the P-M option must then be added to DairyPlan.

Note!

Each additional option requires a new software key. The costs of the new options are calculated by the Technical Centre or the dealer if they have not been obtained before.

Network structure

In a network several computers are connected together. This means that all users can work with one data source (databank).

In the centre there is the main computer (also called a server or master computer) on which DairyPlan is installed with the databank.
All of the other computers (also called slave computers, clients or work stations) use DairyPlan without it being installed on their own hard disks.

The size of the network depends upon the network software and the network hardware used. There are networks on which between 2 and over 255 users or computers can be connected.

For more information on this subject see section on "DairyPlan Network Installation"

3.2 DPNet PCI/USB Interface

The DPNet interface is used in DPNet network technology based systems.

It is intended only for creating a data connection between the ”DairyPlan” program and the connected devices.

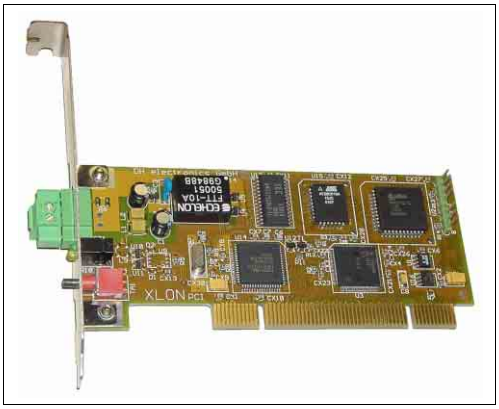
> **Note!**
>
> The DPNet interface is not designed for use in any types of application other than the ones listed here!
> This would be considered as use not in accordance with the intended purpose!

Technical data

DPNet interface XLON PCI	
Operating systems:	Win 2000 / XP / Vista
Connection:	PCI
Dimensions:	4,7cm x 13.2cm (HxL)
CE: - Interference immunity	EN61000-6-1
- Emitted interference	EN61000-6-3 / EN55022

Includes

- DPNet interface



Part No.	Description	
7300-9047-110	DPNet interface	XLON PCI

> **Note!**
> Alternatively there is a USB port for use with a portable computer.

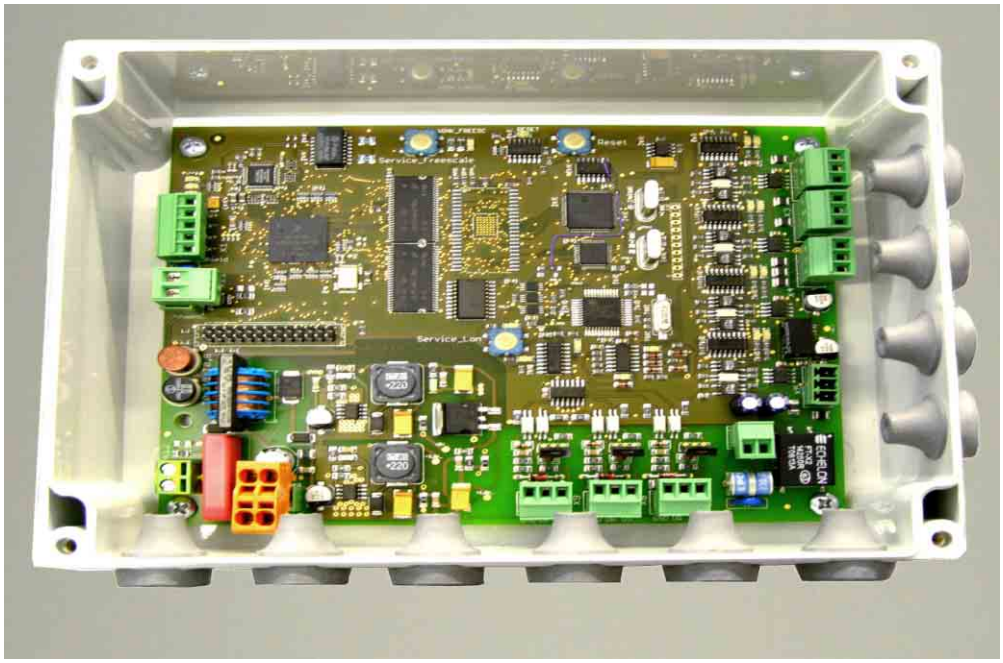
- Driver software on diskette

> **Note!**
>
> The driver for the DPNet interface can also be found on the ”DairyPlan” CD (to be ordered separately).
> Or download from: www.gea-farmtechnologies.com

Bearings

Storage temperature:	-45 °C .... +60 °C

3.3 DMS 21 GateWay



The DMS 21 GateWay is used in milking parlours that work with DPNetB network technology.

- It has 4 DPNetB/ 3 VC3/ 1 Ethernet and one DPNet-A channel.
- It is intended only for creating a network in a GEA Farm Technologies GmbH milking parlour.

The devices are connected to the computer via the Ethernet channel.

No driver software is needed for the DMS 21 GateWay.

For further information on the subject, see the manual
7300-90..-008 DMS 21 GateWay

3.4 Multi-Port Connection Set

The Multi-Port connection set is intended only for creating a data connection between the ”DairyPlan” program and connected GEA Farm Technologies GmbH devices with VC4/3 communication technology (e.g. feed stations).

Each Multi-Port connection set has 4 DairyPlan channels (current loop) to each of which up to 16 peripherals can be connected.

Systems that only need one DairyPlan channel (current loop) to connect one type of GEA Farm Technologies GmbH peripheral can use the ”Uno-Port connection set”.

This is connected to an existing ”COM interface” (see ”Connecting the Uno-Port connection set”).

Note!

The Multi-Port connection set is not intended for applications other than those listed here - and that would be considered as improper use!

Technical data

Multi-Port card 41094B (7162-9047-170)

Compatibility:	PCI 32-bit serial card for Pentium / MMX / Pentium II / III / IV
Operating systems:	Win 2000, Win XP, Vista
Modules:	4x FIFO 16C950 serial module with PCI bridge
Connection:	SUB-D 37 socket
PCB:	2-layer 120mm x 79mm
CE:	
- Interference immunity	EN61000-6-1
- Emitted interference	EN61000-6-3 / EN55022

Data cable 37/37

Length:	1.8 m
Assignment:	37-pole 1:1, screened

CL transformer box

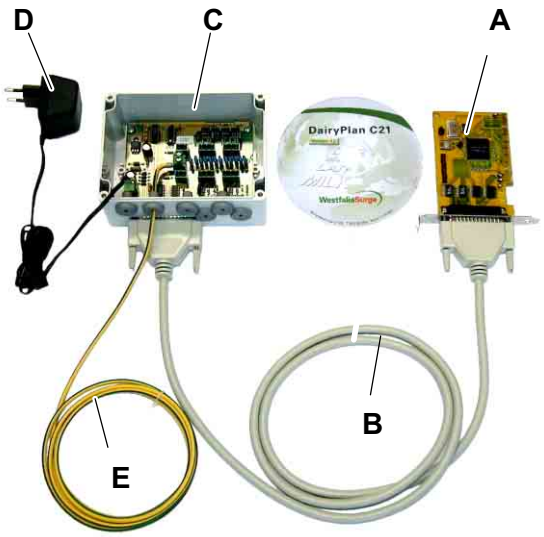
Data input:	37-pole SUB-D from Multi-Port card
Data output:	4 x current loop (CL)
Supply voltage:	9V AC / min. 150 mA
Over-voltage protection:	Diverted to earth connection via varistors (earth circuit connector) Connection line min. 4mm^2 (Cu)
Dimensions:	160mm x 120mm x 90mm

Plug-in power pack

Input data:	230V ~ / 50 Hz / (USA: 115V)
Output data:	9V AC / 300 mA
Connection line (sec.):	approx. 2m

Includes

Individual parts of the Multi-Port connection set



Pos.	Part No.	Description	
	7162-9046-020	Electronic card, complete (Multi-Port-Anschluss-Set)	PCI, 230V
	7162-9046-030	Electronic card, complete (Multi-Port-Anschluss-Set)	PCI, 115V
	7162-9046-040	Electronic card, complete (Uno-Port-Anschluss-Set)	COM, 230V
A	7162-9047-170	Multi-Port card (type 41094B)	PCI
B	7162-2380-060	Data cable	37/37
B	7162-2380-050	Data cable	37/9
C	7162-2680-040	CL transformer box	
D	7162-5986-000	Plug-in power pack	230V / 9V
D	7162-5986-010	Plug-in power pack	115V / 9V
E		4mm^2 Line for connection to the earth circuit connector (green/yellow)	

Note!
The driver for the Multi-Port Card 7162-9047-170 is on the DairyPlan CD.
If required, current driver versions are available on the GEA Farm Technologies GmbH website.

Bearings

Storage temperature:	-10 °C .... +70 °C

3.5 Default Settings

Other settings can be used!

Changes may only be made by authorized personnel!

Check all factory settings before commissioning and adjust in line with the individual requirements of the installation or animal if necessary.

Attention!
Incorrect settings can have a negative effect on the health of the animals, the quality of the milk and milking results!

4 Transport

4.1 Checking what has been delivered

- Installation CD

> **Note!**
> Always keep the CD safe after installation because the serial number may be needed.

- Installation instructions

Part No.	Description
7162-2362-080	The DairyPlan CD ROM contains all languages, all modules, types of installation include new, demo, update, upgrade
7162-2362-090	CD ROM manual
7162-2362-100	DVD-ROM for ”acapela” speech output

4.2 Storage conditions

- Storage temperature
  Store the CD at room temperature.

When storing the goods supplied, the location must provide protection against:

- Moisture
- External damage (jolts, knocks, rodents, insects, . . .)
- Direct sunlight

4.3 Information on disposing of packing material

After unpacking, the packing material is to be handled properly and disposed of carefully in accordance with the valid local regulations on waste disposal and utilisation.

5 Installation guide

The following steps are required to install or start up DairyPlan:

- Check system requirements.
  To make sure that all of DP's features can be taken advantage of.

  Section: System requirements (recommendations)

- Fitting the interfaces and installing the corresponding drivers.

  Section: Interface installation

  - DPNet PCI/USB-Interface
    (Beschreibung siehe entsprechendes Kapitel)

  Section: DPNet Interface

  - DMS 21 GateWay
    (See relevant section for explanation)
  - Multi-Port Connection Set
    (See relevant section for explanation)

  Section: Multi-Port Connection Set Installation

- Installation of the DairyPlan herd management program

  Section: DairyPlan installation

  - Obtain authorization (software key) through the specialist dealer

- Start-up DairyPlan
  Enter basic settings for DairyPlan
  Adjusting the program to the conditions of the installation.

  Section: Starting up DairyPlan

- Installation and start-up of DPNet components with DPNetInstall
  (See relevant section for explanation)

  Section: DPNet installation

- Functional test for the peripheral units.

  Section: Feed System Test

  Section: Testing Metatron

These steps are described in the following sections in chronological order.

If necessary, please contact your nearest authorised technical dealer.

5.1 Special personnel qualification required for installation

Installation may only be carried out by specially qualified personnel in accordance with the safety instructions.

Also see the section on ”Personnel qualification”.

5.2 Safety instructions for installation

Also read the chapter on ”Safety”.

Special hazards during installation:

- Electrostatic processes can cause damage to electronic components.

  Attention!
  Only touch the edge of the printed circuit board and avoid static caused for example by clothing.

- Before working on electrical installations or equipment (components, housings, etc.), they are to be disconnected from the mains.
  Any on/off or emergency stop switches are to be fitted with a lock to immobilise them in the open position and a warning sign is to be put up.

6 System requirements (recommendations)

Voltage stabiliser

Since the power supply in agricultural establishments frequently fluctuates heavily, it is advisable to use a voltage stabiliser to protect your PC and ensure there are no interruptions in the supply.

PC-Protective Measures

PC-These measures (e.g. surge voltage protection, lightning protection) should be agreed with your supplier.

Check the computer configuration

☞ **Note!**

A note on working with DairyPlan 5
GEA Farm Technologies GmbH can only guarantee problem-free working with DairyPlan if it has been installed in accordance with the installation instructions. Other programs installed on the PC do not generally interfere with the operation of DairyPlan. But it is necessary to check in each individual case.

The first step in the installation is to check the configuration of the computer. This step is necessary to ensure that all of DairyPlan's features will be able to be used later on. After checking, please enter the computer's configuration in the installation description at the end of the instructions.

Information on the computer configuration is available from the Windows Start Button under "Settings-> Control Panel-> System".

☞ **Note!**

Please note the "Recommended computer equipment" in the current Technical Information sheets from GEA Farm Technologies GmbH.

PC requirements / recommendations

The following basic configuration is recommended for using DairyPlan:

<table>
<tr><th colspan="2">Minimum requirement / Recommendation</th></tr>
<tr><td>Operating system</td><td>• Windows 2000
• Windows XP
• Windows Vista</td></tr>
<tr><td>PCI slots</td><td>Free PCI slots for the peripherals connected
(see also section on ”DairyPlan information / slots”).
1 multi-port connection set = 4 channels (VC3)</td></tr>
<tr><td>Processor</td><td>• Pentium 4 (at least 2 GHz) or comparable processors</td></tr>
<tr><td rowspan="2">RAM (working memory)</td><td>
<table>
<tr><th>Animals</th><th>Win2000/XP</th><th>Windows Vista</th></tr>
<tr><td>500</td><td>256 MB</td><td>1 GB</td></tr>
<tr><td>500 - 1000</td><td>384 MB</td><td>1 GB</td></tr>
<tr><td>1000 - 2500</td><td>512 MB</td><td>2 GB</td></tr>
<tr><td>2500 - . . .</td><td>1024 MB</td><td>2 GB</td></tr>
</table>
</td></tr>
<tr><td>Comment:
The amount of RAM depends upon the number of animal data records and the choice/amount of data to be stored on each animal.
The number of animal data records is calculated from the total number of active (living) animals and inactive (dead) animals.
Include an annual herd growth of approximately 30% if the outgoing animals are to be archived in the DairyPlan data record.
The working memory required also depends upon the hardware configuration, the operating system and the software installed on the computer.
Please contact the PC dealer if you have any questions regarding the computer configuration.</td></tr>
<tr><td>Hard disk</td><td>4 GByte and larger. For DP, at least the following is required:
• 500 MB (up to 1000 animals)
• + 100 MB for every further 1000 animals</td></tr>
<tr><td>Printer</td><td>Graphics printer for Windows</td></tr>
<tr><td>Modem</td><td>Internet access for the DairyPlan online update</td></tr>
<tr><td>Drives for alternative data carriers</td><td>24x (4x)
At least one CD ROM drive is required for installing the DairyPlan programs.
One DVD drive is required for installing speech output (TextToSpeech).</td></tr>
<tr><td rowspan="2">Drives and data carriers for data backup:</td><td>CD / DVD burner</td></tr>
<tr><td>USB storage media</td></tr>
<tr><td>Monitor / Graphics card</td><td>17” Monitor
Monitor and graphics card should support a screen resolution of at least 1024*768 (800*600) pixels with „True color -16 bit” (256) colours.</td></tr>
<tr><td>Network card</td><td>100 MB network card for connecting the PC to a DMS 21 GateWay</td></tr>
</table>

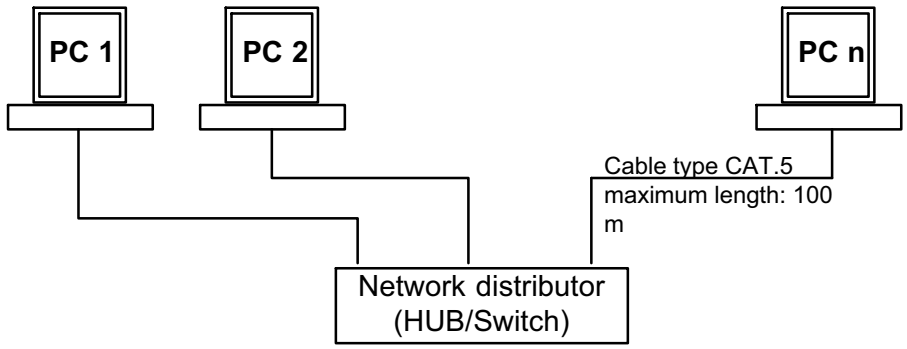
Information on network operation

Note!
Because of the large quantities of data, the network transmission rate required is at least 100 Mbit/sec.

- additional network card for the PC (e.g. 100 MBit/s NE2000 or compatible)
- 100Mbit cable (e.g. CAT.5) for connection to other computers.
  Connection of 2 PCs with cross-over cable (special cable for connecting PCs without a HUB).
  A network hub/switch and corresponding cable is required if there are 3 or more PCs.

Cable type	max. distance	Transmission speed	PC requirements
CAT.5 Shield Twisted Pair	80-100 m	100 MBit/s	Network card and network software must be available on each computer. A network distributor (HUB/Switch) is required for each network.

Network design using CAT.5 cable



Attention!

The use of 10 Mbit cables is **not** recommended!

An efficient network is necessary if DairyPlan is to be used effectively. A transmission speed of at least 100 MBit/s is required for this.

7 Installation of the interfaces

A DPNet interface or Multi-Port connection set is installed to enable data exchange with the DPNet peripherals.

A corresponding driver is then installed, or a DMS 21 GateWay connected.

7.1 Installation of DPNet PCI interface

Handle all electronic components correctly to prevent electrostatic damage.

Conditions of application

Note!

The system voltage (230 VAC) must be stable!

If the system voltage is not stable (significant fluctuations or voltage dips), an uninterruptible power supply (UPS) must be connected upstream.

Ambient temperature: 0 °C ... 50 °C

Installing the DPNet interface

Attention!
When installing the DPNet interface, switch off the PC and disconnect it from the mains (230 V)!

- Disconnect the mains and all connected peripherals from the mains.
- Carefully open the PC casing.
- Carefully install the DPNet interface in a free PCI slot and screw to the housing.
- Close the PC again.

Note!

- With some motherboards, the AGP slot and the first PCI slot share an Interrupt (IRQ). It is recommended that you start with the second PCI slot.

Data line

Attention!
When connecting the lines, the whole installation is to be disconnected from the power supply so that no short-circuits can occur due to uninsulated cable ends.

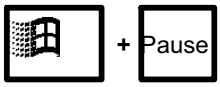
Installation of the driver

Windows 2000 / XP / Vista (DPNet interface ”XLON-PCI”)

- Once the interface has been installed, restart the computer. Windows will identify the new interface as it boots up.
- Install the driver by following the instructions on the screen (see following section).
- PC configuration will be updated. The entry ”XLON Lonworks Network Interfaces” has been applied

Note!

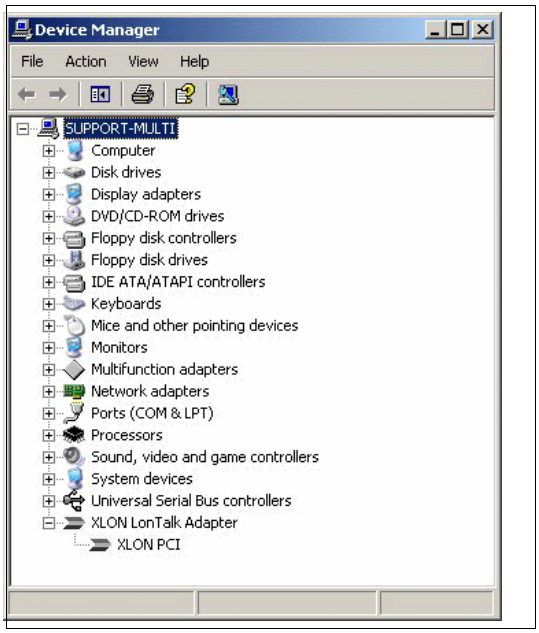
The system properties (Hardware-> Device Manager) can also be called up with this key combination.



Call up the index card according to the operating system in each case under:

Win2000:
”Start > Settings > System control > System > Hardware > Device Manager”

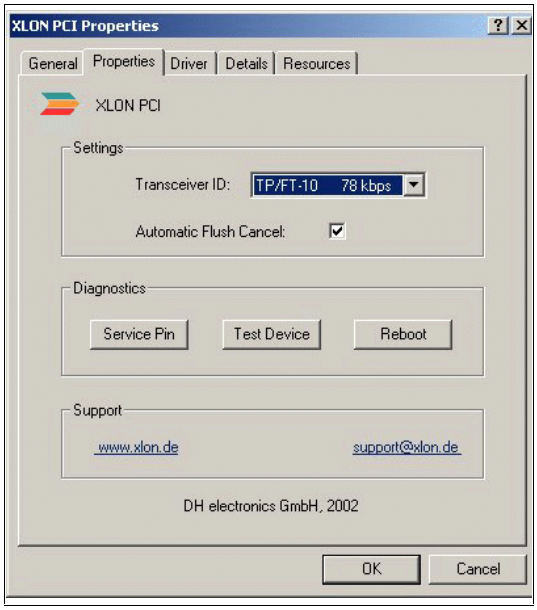
Windows XP:
”Start > System control > Printer and other hardware > See also System > Hardware > Device Manager”



Select ”Properties” to check that installation has been carried out correctly.

”Properties” index card

- Transceiver ID:
  Set as shown in the diagram opposite!
- Service PIN:
  Service PIN - message is sent
- Test Device:
  A functional test of the card is carried out.
- Reboot:
  The card is restarted.



Deinstallation

If you want to uninstall the DPNet interface driver, select the entry in the index card and then click on the ”Remove” button.

The driver is then removed.

Note!

The computer must be restarted in order to accept the changes.

Set-up with DPNetInstall

Once the DPNet interface has been successfully fitted and the driver installed, after installing the DairyPlan herd management program the settings have to be made with DPNetInstall.

For more information on this subject see section on
Installing DPNet-> Setting up DPNet Interface

7.2 Installation of the network connection to the DMS 21 GateWay

The DMS 21 GateWay is connected with a network cable (Ethernet cable Cat 5 cable Part No. 0005-3999-078).

The computer must have a network card that supports 100 MB/s.

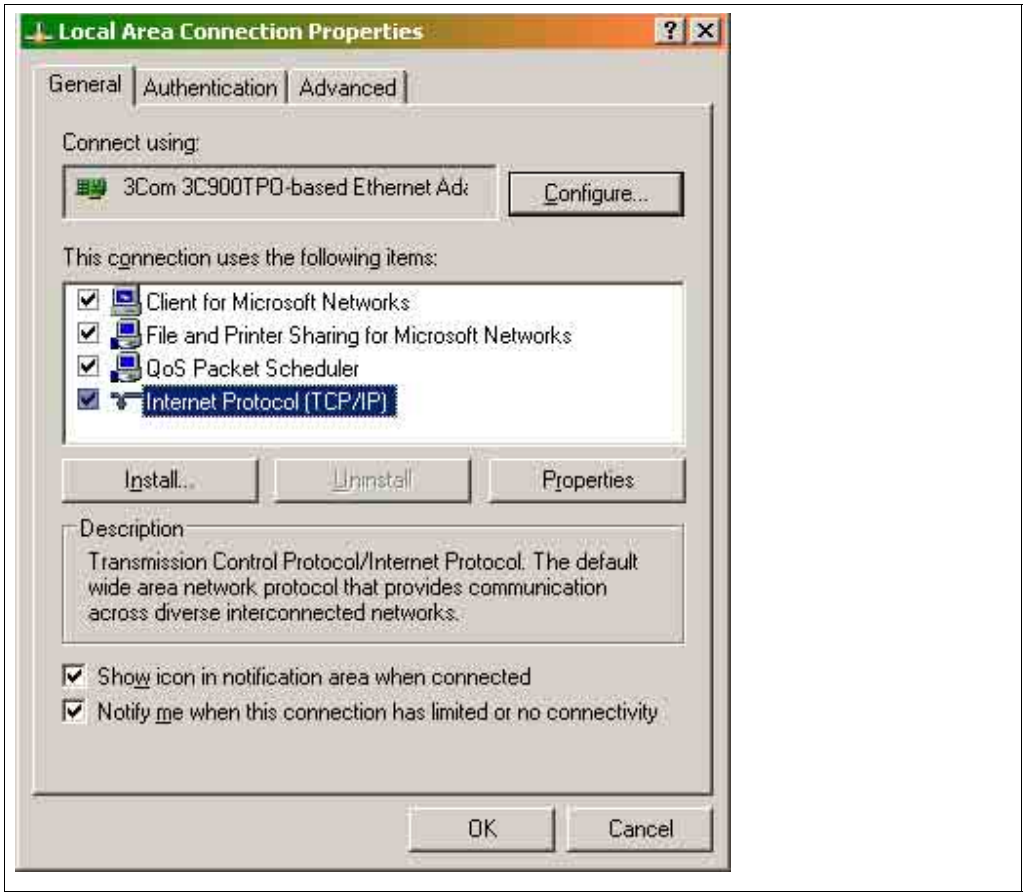
On the computer make the following setting in the network connection:

- Set IP Address: 192.168.1.2 (example)
- Subnet Mask: 255.255.255.0

In Microsoft Windows XP this is through:

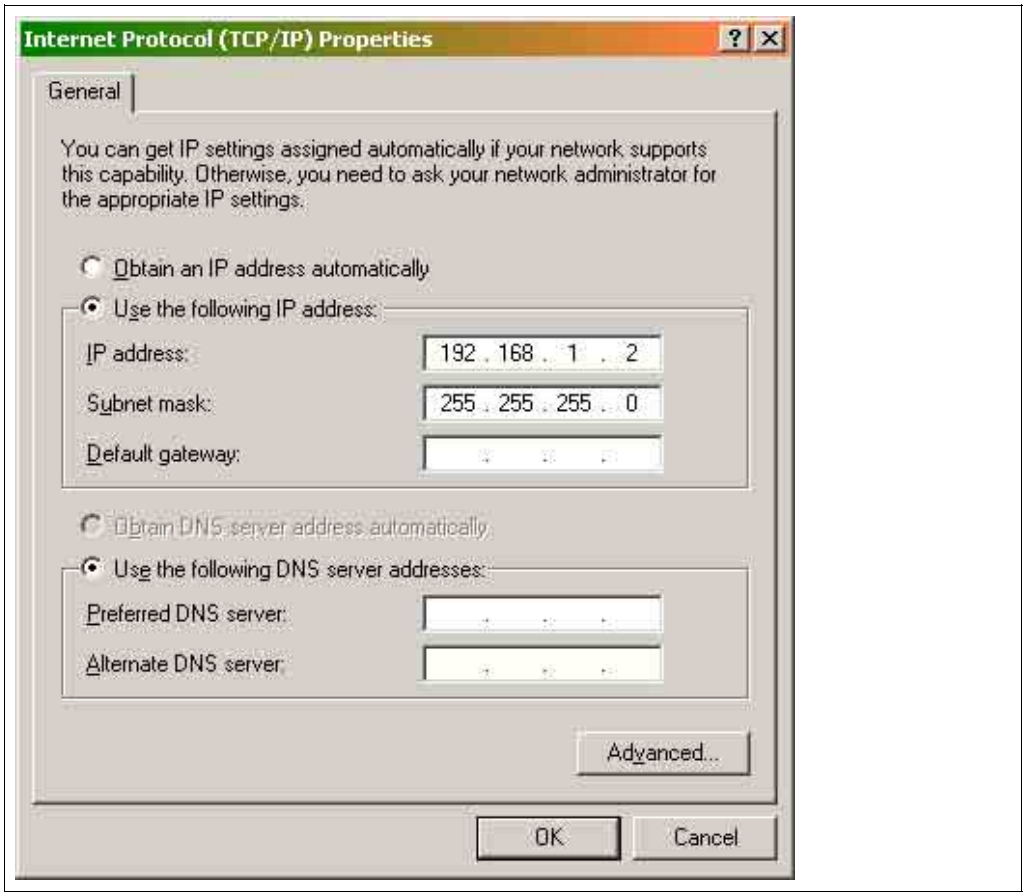
- System control Start ->right mouse-click on the connection required ->Properties

The following dialogue appears:



Select Internet Protocol (TCP/IP) and click on ”Properties”.

Attention!
The IP address xxx.xxx.xxx.240 is reserved for the GateWay.
Do not use the final number 240 as an IP address for a PC or other device in the network.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 2
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Enter the settings shown for IP address and Subnet mask.

If the computer is also in a company or office network, an additional network card must be fitted.

The address ranges for the networks must differ at at least the third point.

Example:	Gateway network	192.168.1.xxx
	Company network	192.168.55.xxx

7.3 Installing the multi-port connection set

Note!

The ”Uno-Port connection set” can be used in installations that only need one DairyPlan channel (current loop) to connect one type of GEA Farm Technologies peripheral.

When installing, make sure that the data lines are connected while the device is disconnected from the power supply so that no short circuits can occur through the uninsulated cable ends.

Attention!
When fitting the Multi-Port card the PC should be switched off and separated from the mains (230V).

Handle all electronic components correctly to prevent electrostatic damage.

Conditions of application

The Multi-Port connection set should be installed in an office environment in the direct vicinity of the PC.
The CL transformer box is to be mounted on a wall.

Ambient temperature:	0 °C ... 40 °C

supply connections

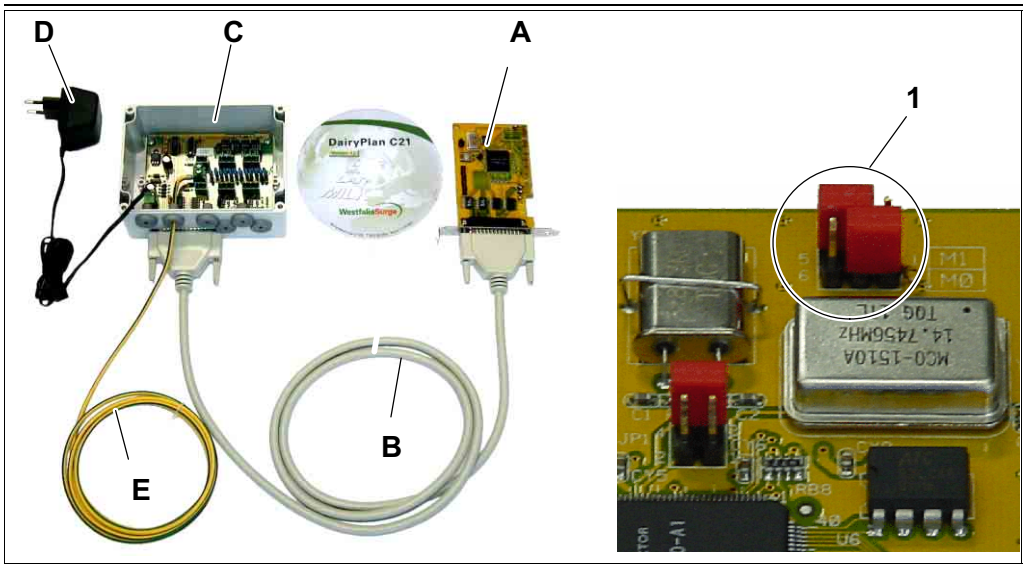
A mains socket (230V AC) is required to supply the transformer box. This should be provided by the client.

The mains voltage must be stable.

If the mains voltage is polluted by large fluctuations or voltage dips, an uninterruptible power supply (UPS) must be connected in series.

7.3.1 Connecting the Multi-Port connection set

Attention!
If several cards are required, then these are to be installed individually, one after the other.



- Plug in jumper (1) as shown (Multi-Port Card 7162-9047-170).

Multi-Port card (A)

The Multi-Port card is inserted in a free PCI slot. This requires the following steps:

- Disconnect the mains and all connected peripherals from the mains.
- Loosen the screws on the back of the PC and carefully open the housing.
- Carefully insert the Multi-Port card in a free PCI slot and fasten to the housing with a screw.

Attention!
On most motherboards the AGP slot and the first PCI slot share an interrupt (IRQ). It is recommended to start with the second PCI slot.

- Close the PC again.

Data cable (B)

The data cable (37/37-pole) is used to connect the Multi-Port card to the transformer box. It is to be inserted into the 37-pole plug connector and fixed with screws.

Transformer box (C)

The transformer box is to be mounted on a wall. Make sure that the housing is mounted with the openings at the bottom. The lines are fed through a cable gland into the inside of the box.

Attention!

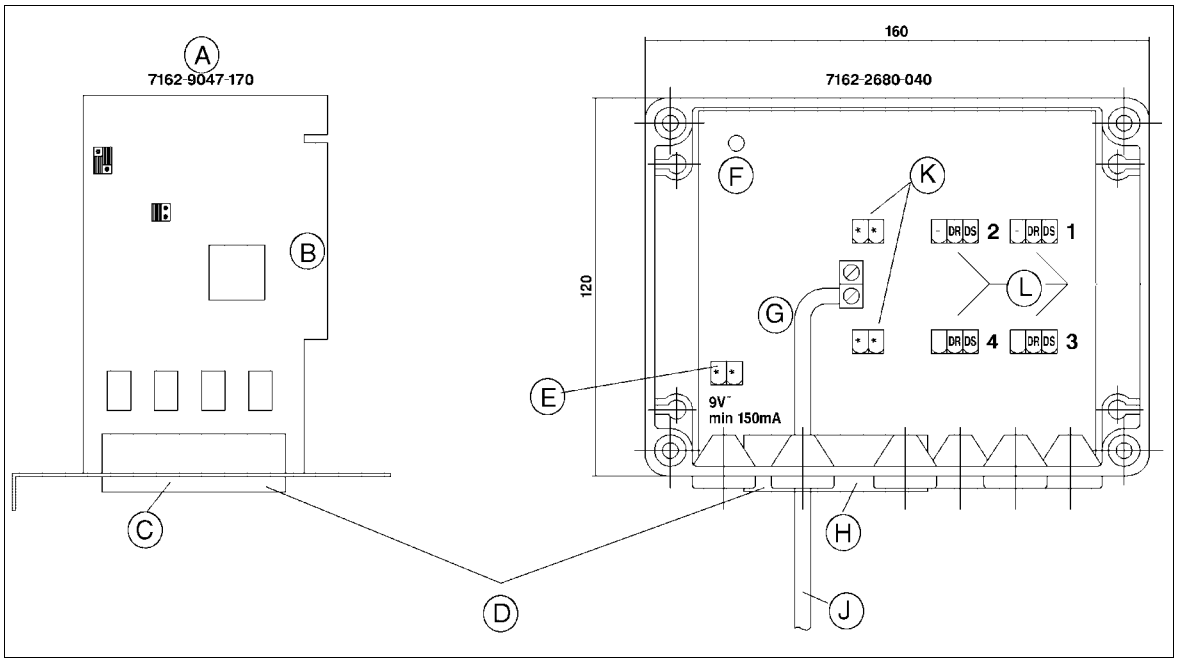
- When connecting the lines the device and the whole installation should be disconnected from the power supply so that no short-circuits can occur due to the uninsulated cable ends.
- The shielding used for the data lines may not be connected to the CL wall box. It is to be connected to the fuse block in the power supply at one end.

In order to increase the protection against overvoltages on the data lines, the green and yellow equipotential bonding conductor (4mm2) is to be connected to the equipotential bonding strip (EBS) from the customer's electrical installation. It can be made shorter or longer as required.

The connection facility should be provided by the client.

All work on the electrical system should only ever be carried out by trained electricians.

Installation diagram for Multi-Port Connection Set



A	Multi-Port card TYPE 41094 Rev. C
B	PCI contact strip
C	SUB D 37 connection to the CL converter
D	Connection via data cable 7162-2380-060
E	Power supply
F	LED supply voltage
G	Equipotential bonding connection (PA) min 4 mm2
H	SUB D 37 connection to the Multi-Port card
J	Cable green/yellow 4 mm2, 2m, equipotential bonding connection
K	Power supply for test plug (7162-9047-080)
L	Channel 1...4, connection of peripherals (to fuse block DS, DR, -)

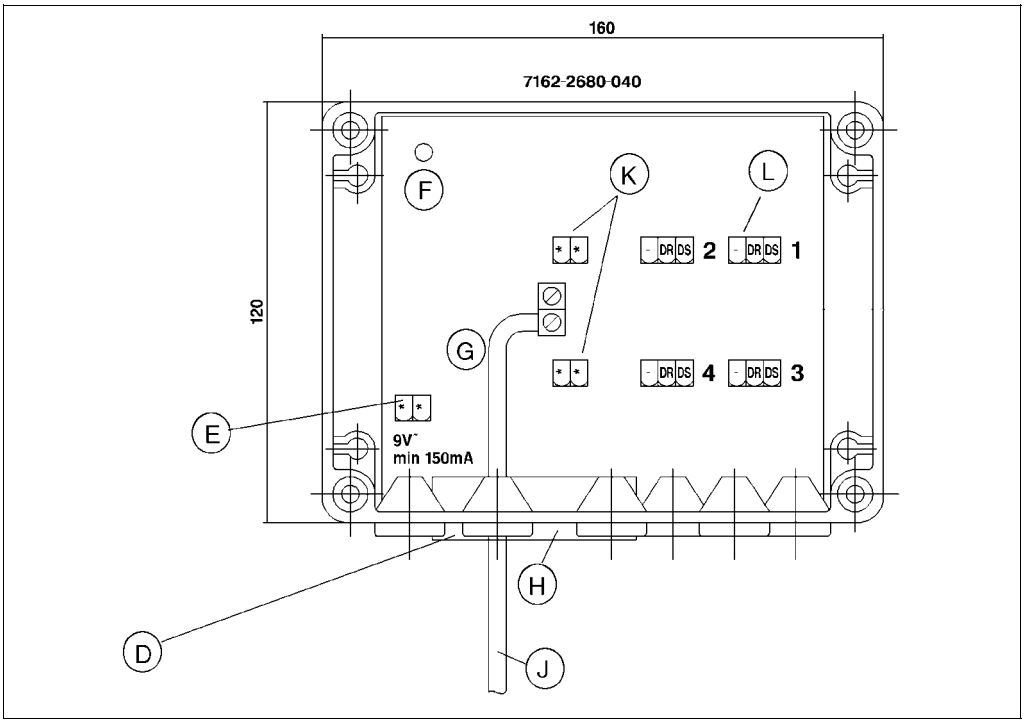
7.3.2 Connecting the Uno-Port connection set

- Install the transformer box (as described in the section entitled ”Multi-Port connection set”).
- Use the data cable (37/9-pole) to connect the transformer box to a free COM port (COM1, COM2).

Note!

- Only channel ”1” can be used on the transformer box!
- It is not necessary for a driver to be installed.
- The Single Port Connection Set can be combined with a Multi-Port Connection Set.
  Make sure that the DP channels are correctly assigned to the COM ports.

Installation diagram for Single Port Connection Set



Legend	
D	Connect with data cable 7162-2380-050 (to the PC COM port)
E	Power supply
F	LED supply voltage
G	Equipotential bonding connection (PA) min 4 mm^2
H	SUB D 37 connection to COM interface (PC)
J	Cable green/yellow 4 mm^2, 2m, equipotential bonding connection
K	Power supply for test plug (7162-9047-080)
L	Channel 1, connection of peripherals (to fuse block DS, DR, -)

7.3.3 Installation of the driver

Multi-Port card TYPE 41094 Rev. C (7162-9047-170)

When the computer is switched on the PC devices installed are displayed.

The scrolling display can be stopped with the ”Pause” key so that, for example, the ”PCI / AGP device listing” can be viewed:

Bus No	Device No	Func No	Vendor ID	Device ID	Device Class	IRQ
0	11	0	1415	9501	Simple COMM. Controller	11

☞ **Note!**

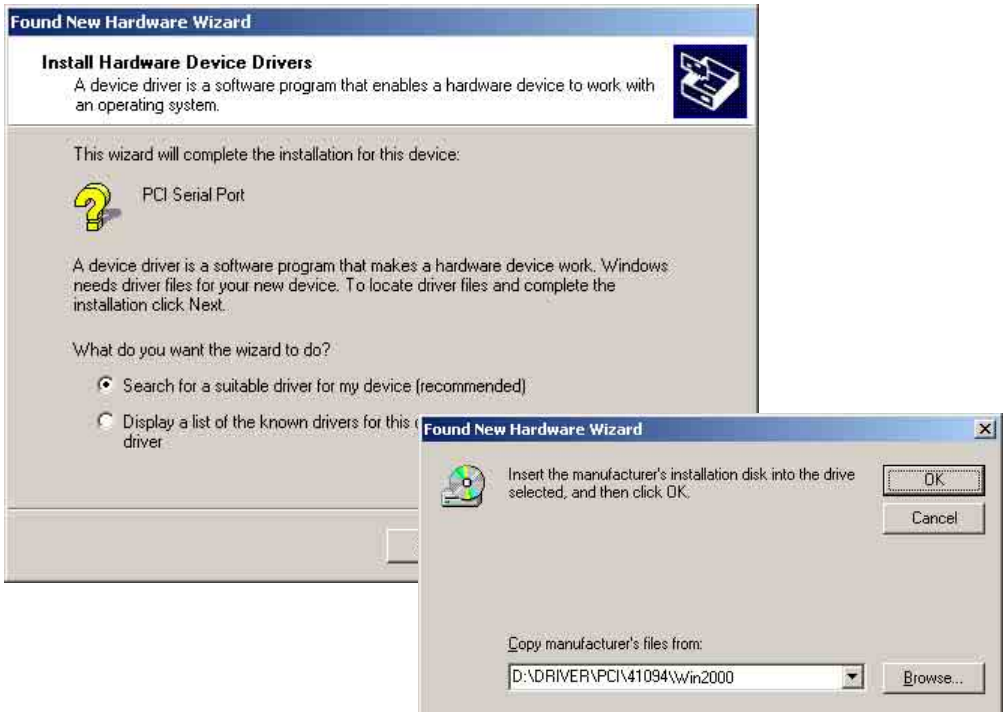
The display for ”Device No” and ”IRQ” depends upon which slot the Multi-Port card is in!

Press any key for the display to continue.

Windows 2000

After starting the Windows 2000 operating system, a new ”16C95x serial port” will be identified. The procedure for installating the driver is as follows.

The automatic hardware identification identifies the Multi-Port card and starts the installation assistant.


Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
PCI Serial Port
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this
driver
Found New Hardware Wizard
Insert the manufacturer's installation disk into the drive selected, and then click OK.
OK
Cancel
Copy manufacturer's files from:
D:\DRIVER\PCI\41094\Win2000
Browse...

In order to install the correct driver, it is necessary to specify its position.

- The driver is on the DairyPlan CD in the directory: ”\Driver\PCI\41094\Win9x_2K_XP”
- The driver can also be downloaded from the GEA Farm Technologies GmbH website. www.gea-farmtechnologies.com

Found New Hardware Wizard
Locate Driver Files
Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
PCI Serial Port
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back
Next >
Cancel

Carry out the installation step by step. At the end click on ”End”.

Next install the driver for the ”PCI parallel port”. Installation should be carried out as described above.

Once the driver has been installed, you will need to reboot the computer.

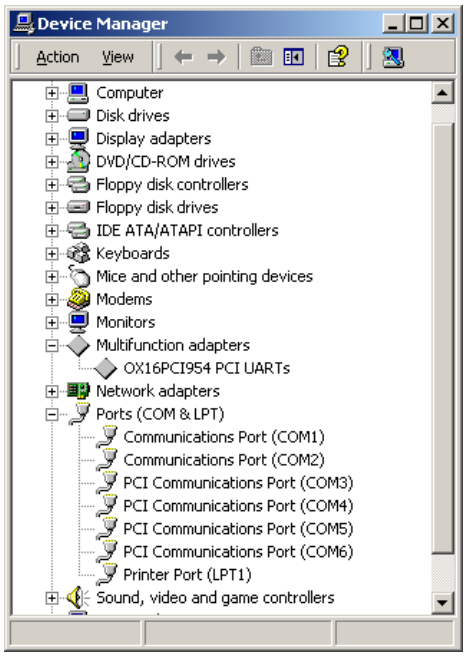
Note!

It is possible that Windows may find ”new hardware” again. If so, the details are to be specified as described above.

After installation

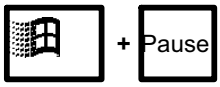
Then, in ”Start > Settings > Control Panel > System > Hardware > Device Manager” under ”Ports (COM and LPT)” check whether all of the ports have been installed correctly.

Example:
COM3 ... COM6 are to be entered under ”Connections (COM and LPT)”. The relevant settings for the ports are to be entered in DPSetup (see ”Settings under DairyPlan (DPSetup)”).

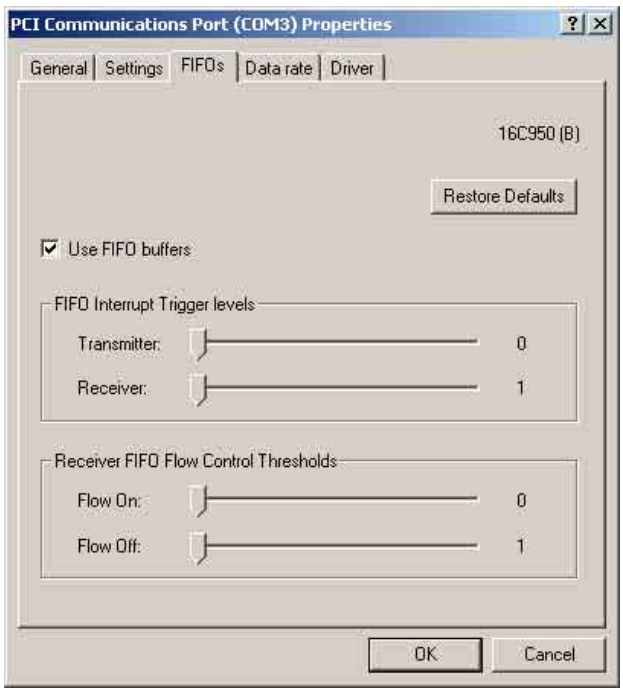


Note!

The system properties (Device Manager) can also be called up with this key combination.



Once the driver has been installed correctly, the FIFO settings for each new COM port installed will have to be adjusted. To do this, the slide controllers are to be moved over to the left.



Windows XP / Vista

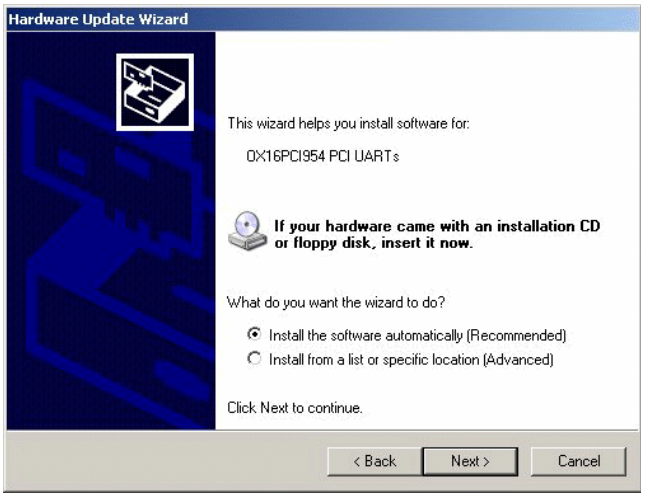
The newly installed multi-port card is identified when the Windows XP / Vista operating system starts. Install the driver as follows.

Note!

The installation can be performed automatically (driver is searched for on all available media) or manually (driver location is specified)!

Automatic installation

This installation should be performed for the multi-port card and the COM ports.


Hardware Update Wizard
This wizard helps you install software for:
OX16PCI954 PCI UARTs
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

Note!

For the driver to be installed automatically, make sure that the DairyPlan CD is in the CD ROM drive!

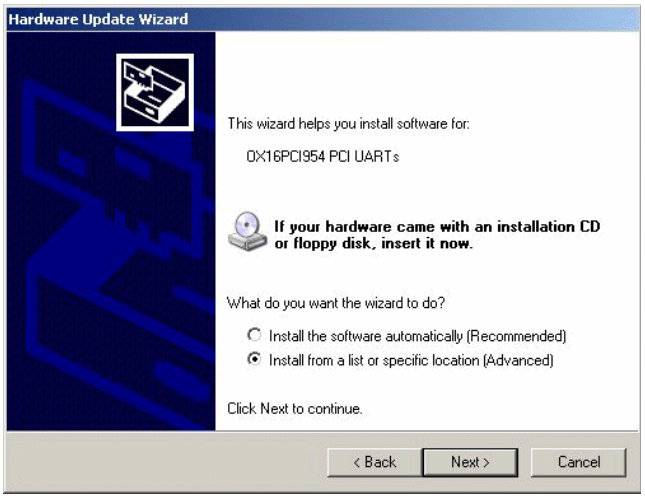
- To conclude installation click on ”Finish”.
- Restart the computer after installation.

Note!

It is possible that Windows may find ”new hardware” again. If so, the installation should be repeated!

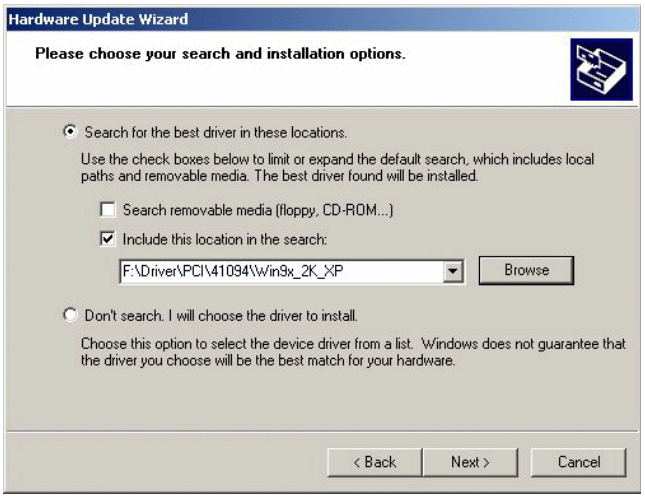
Manual installation

This installation should be performed for the multi-port card and the COM ports.


Hardware Update Wizard
This wizard helps you install software for:
0X16PCI954 PCI UARTs
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

In order to install the correct driver, it is necessary to specify its position.

- The driver is on the DairyPlan CD in the directory: ”\Driver\PCI\41094\Win XP”
- The driver can also be downloaded from the GEA Farm Technologies GmbH website. www.gea-farmtechnologies.com


Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
F:\Driver\PCI\41094\Win9x_2K_XP
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

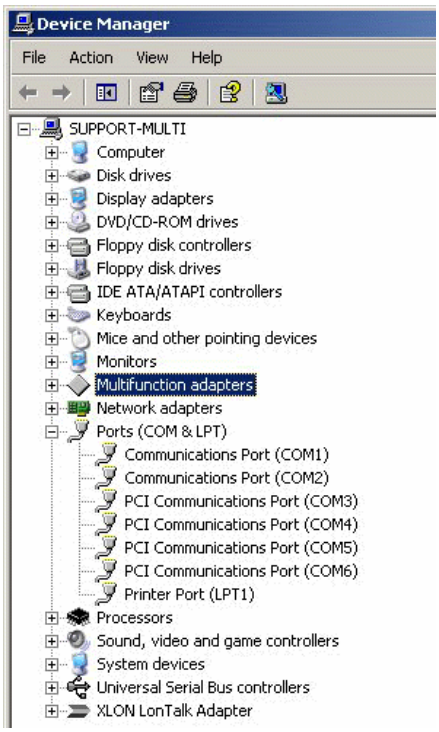
- To conclude installation click on ”Finish”.
- Restart the computer after installation.

Note!

It is possible that Windows may find ”new hardware” again. If so, the installation should be repeated!

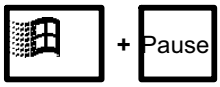
After installation

Then, in the Windows-Device Manager, under ”Ports (COM and LPT)” check whether all of the ports have been installed correctly.



Note!

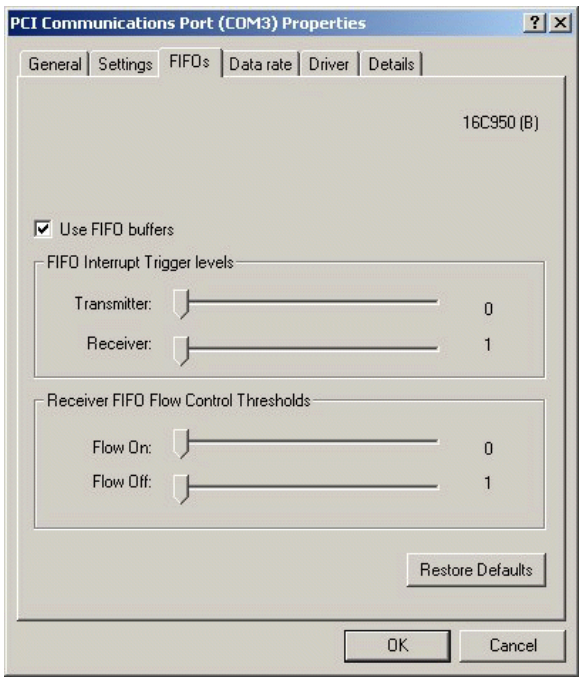
The system properties (Device Manager) can also be called up with this key combination.



Example:
COM3 ... COM6 are to be entered under ”Connections (COM and LPT)”. The relevant settings for the ports are to be entered in DPSetup (see ”Settings under DairyPlan (DPSetup)”).

Once the driver has been installed correctly, the ”FIFO settings” (COM port properties) for each new COM port installed will have to be adjusted.

Move the slide control (as shown in the figure) over to the left.



Uninstallation of driver for Multi-Port card TYPE 41094 Rev.C (7162-9047-170)

> **Note!**
>
> The computer must be restarted after uninstalling so that the changes can be registered.

The Windows drivers for the multi-port card (7162-9047-170) are uninstalled directly in Device Manager.

Windows 2000

Under ”Multi-function adapters” mark the entry for the multi-port card (OX16PCI954 PCI UARTs) and remove in the menu ”Process > Uninstall”.

Windows XP

Under ”Multi-function adapters” mark the entry for the multi-port card (OX16PCI954 PCI UARTs) and remove in the menu ”Process > Uninstall”.

7.3.4 Checking data connection

When DairyPlan has been installed and configured and all peripherals have been started, it is possible to check the data connection in the program ”DPProcessControl”.

A detailed display of all of the devices connected with VC4/3 communication appears in the program ”DPPort.exe”. The channels on which the devices are displayed must also be shown on the ”DPSetup” main screen.

> **Note!**
>
> The DOS program ”Port.exe” cannot be used to check communication in systems with multi-port cards. Use the Windows program ”DPPort.exe”.

7.3.5 Setting up the multi-port card in DairyPlan

The multi-port card is set up when DairyPlan is started up.

For more information on this subject see section on
Setting up the multi-port card with DPSetup

8 Installing DairyPlan

To install the DairyPlan herd management program, have ready the unopened DairyPlan CD.

If the sticker with the serial number has already been removed it can be assumed that this CD has already been installed once before.

Serial Numbers

Why a serial number?

- The serial number is an encoded number that clearly identifies the installation (not the customer).
- The installation, together with the modules installed, is registered under the serial number.
- An installation is identified by the serial number of the first-time installation.
- The serial number is carried over from the previous program version if the software is upgraded.

When is a serial number needed?

The serial number will be asked for when the HerdManager or DairyMonitor system level is installed (see explanation on system levels).

Note!

DairyPlan cannot be installed if the serial number is incorrect or missing.

If problems are encountered when installing in Windows Vista, it may be that the User Account Manager has to be switched off.

Where do I find the serial number?

On the CD packaging there is a sticker with the so-called CD key.

The first figures in the CD key are the serial number.

The other figures are a kind of check sum to check that the serial number has been entered correctly.

The whole CD key should be entered at this point.

If the sticker has already been opened, it can be assumed that this CD has already been installed and that the serial number has already been assigned therefore.

A new serial number must be obtained for another first-time installation.

By opening the CD packaging by tearing the sticker with the serial number, the customer declares that he agrees with the GEA Farm Technologies GmbH licence conditions.

For more information on this subject see section on DairyPlan licence

Networks

> **Note!**
>
> If DairyPlan is to be installed in a network, see the section on ”DairyPlan Network Installation”.

8.1 System levels and different types of installation

System level

The ”DairyPlan C21” product is offered in different system levels.

- DairySetup ”installation setup”
- DairyMonitor ”installation monitoring”
- HerdManager ”Installation and herd management” (full version) with the different module options:
  - P-M automatic milk metering and conductivity measurement
  - P-F feed station control from DP (excluding feeding in the milking parlour)
  - P-S activity measurement and segregation/scales control
  - HM-D data exchange
  - HM-M2 connection of a handheld computer
  - HM-J connection of certain standalone calf feeders

Note!
For the sake of simplicity, the term ”DairyPlan” and also the abbreviation ”DP” often refers to the whole DairyManagementSystem 21 product’s program system ”DairyPlan C21” regardless of the system level and module options installed in each case.

	Dairy Setup	Dairy Monitor	HerdManager *)							Demo
			P-M	P-F	P-S	P-C	HM-J	HM-D	HM-M2	
DP constantly connected to installation		●	●	●	●	●				
Time restriction										●
Modifications and settings with mobile laptops	●									
Subject to a charge (second software key required)		●	●	●	●	●	●	●	●	
Enter and manage animals	(5 animals)	(5 animals)	●	●	●	●	●	●	●	● (restricted)
Milking parlour installation and setup	●	●	●							●
Installation monitoring, recording installation data - milking parlour		●	●							●
Feeding in the milking parlour (rotary or PF21, without animals only basic ration)			●							●
Identification			●	●	●					●
Activity measurement					●					●
Milking parlour controlled segregation, input in the milking parlour (previously only new types of Capri)	●	●	●							●
Automatically record milk quantities			●							●
Segregation/scales controlled from DP					●					●
Connection of feed stations and calf feeders with DP connection				●						demo data only
Connection of standalone calf feeders C400, V600, V640							●			
Install and setup tank control	●	●				●				●
Installation monitoring, recording installation data - tank control		●				●				●
Certain, mostly national, data exchange functions								●		●
DPMobil, connection of a handheld computer, version 5.230 or higher									●	●

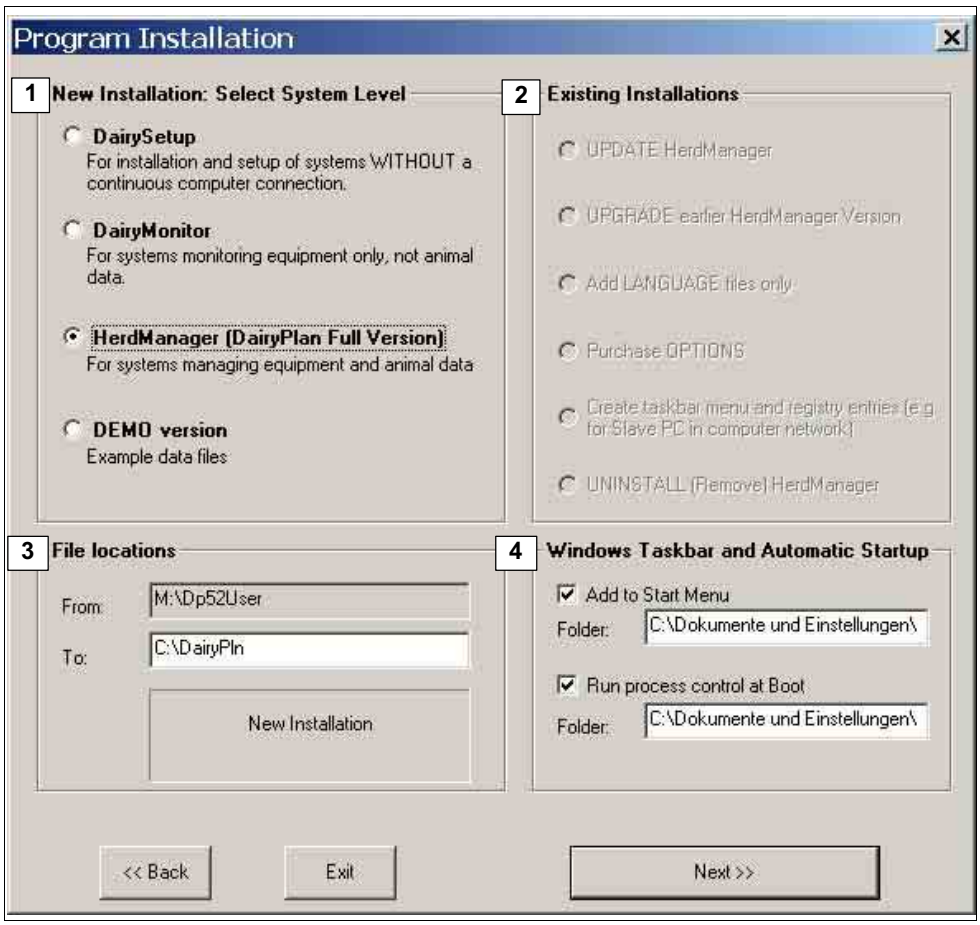
*) Animal capacity greater than zero (K>0), more than 5 animals can be set up

Different types of installation

- **First Time Installation**
  DairyPlan C 21 has not been installed on the computer before.
- **Version Upgrade**
  An older main version is installed on the computer and a new main version is to be installed over it.
  For example, Version 5.112 to Version 5.230 is an upgrade.
- **Update**
  DairyPlan C21 is installed on the computer and a newer program version is to be installed over it, but the main version is the same.
  For example from 5.200 to 5.230 is an update.
- **Online Update**
  Technical dealers can download program updates from the Internet and these can then be installed as an update over an existing installation with the same main version.
  End customers can download a language installation from the Internet and either update the language they have installed or install another language.
- **Module Upgrade**
  For existing systems with the Herdmanager system level (full version):
  A new module is added to the existing installation.
  An example of a module is ”P-M” for milk metering.
- **Language Installation**
  For existing installations:
  Update a language that is already installed or add further languages to it.
- **System Level Upgrade**
  For an existing installation of the DairySetup or DairyMonitor system level:
  Install the higher system level that has been purchased.

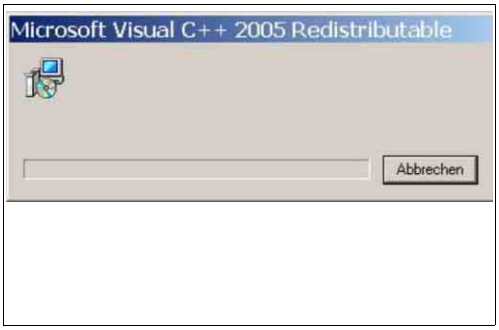
First Time Installation

- Place the DairyPlan 5 CD in the CD drive.
  The DairyPlan installation program starts automatically.
  If it does not, select the DairyPlan CD with Windows Explorer and start the program ”CDAutoPlay” on the CD.
- The display now shows the opening screen of the installation program with information on the version. Click on ”Install” to continue.
- Select the language and type of animal (cows, goats, sheep or buffalo) required.
  Click on ”Next” to continue.
- The ”Program installation” program window appears

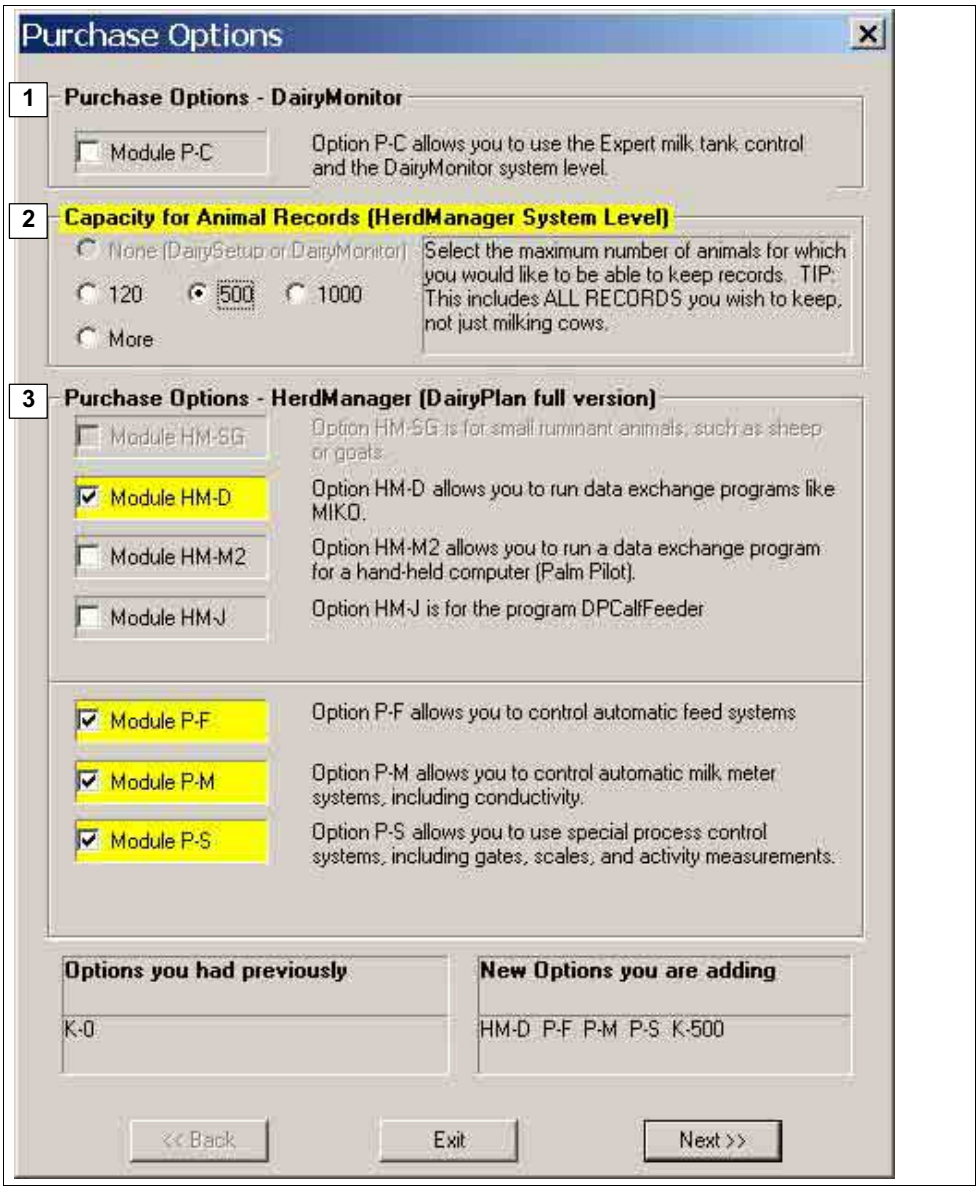


1	”New Installation: Select System Level” • If there is still no installation, select system level. • With the ”DairySetup” or ”DEMO Version” system level, further installation is performed without the serial number, etc. being asked for.
2	”For existing installations” Nothing should be selected for a new installation. **Note!** In the case of existing installations the type of installation required can be selected. (For explanation see section on ”Different types of installation”)
3	”File locations” Select the directory in which DairyPlan is to be installed. The specifications should only be changed in exceptional cases!
4	”Windows task bar and autostart folder” With the option in ”Start Menu / Create program” DairyPlan is copied into the computer system’s program menu. A desktop icon (shortcut) is also set up for direct access. With the ”Start DPProcessControl” option, process control starts automatically when the computer is started. This option should also be set in HerdManager and DairyMonitor systems where process control has to be constantly running. This function is not used in a Demo version or DairySetup level.

- When all of the options have been set, confirm the details with the ”Next” key. During the installation, amongst other things, the hard disk capacity is now checked. A warning is given if there is not enough storage capacity available.
- Entry of the serial number for DairyMonitor and DairyPlan systems.
  The CD key, the first figures of which correspond to the serial number, should be entered. The CD key is on the sticker on the back of the CD sleeve. Enter in the field provided (with no empty spaces) and then click on ”Install”.
- With DairyPlan Version 5.230 or higher, the installation of some necessary additional Microsoft© files is requested.
  In this case the window ”Microsoft Visual C++ Redistributable” appears on the screen.
  This installation stage may last a while, do not interrupt.



- Once the individual program parts have been copied from the CD ROM to the hard disk, for systems with HerdManager or DairyMonitor level, or when changing a DairySetup system, the ”Module Options” window appears.
- Enter details in the ”Module Options” window:


Purchase Options
1
Purchase Options - DairyMonitor
Module P-C
Option P-C allows you to use the Expert milk tank control and the DairyMonitor system level.
2
Capacity for Animal Records (HerdManager System Level)
None (DairySetup or DairyMonitor)
120
500
1000
More
Select the maximum number of animals for which you would like to be able to keep records. TIP: This includes ALL RECORDS you wish to keep, not just milking cows.
3
Purchase Options - HerdManager (DairyPlan full version)
Module HM-SG
Option HM-SG is for small ruminant animals, such as sheep or goats
Module HM-D
Option HM-D allows you to run data exchange programs like MIKO.
Module HM-M2
Option HM-M2 allows you to run a data exchange program for a hand-held computer (Palm Pilot).
Module HM-J
Option HM-J is for the program DPCalfFeeder
Module P-F
Option P-F allows you to control automatic feed systems
Module P-M
Option P-M allows you to control automatic milk meter systems, including conductivity.
Module P-S
Option P-S allows you to use special process control systems, including gates, scales, and activity measurements.
Options you had previously
K-0
New Options you are adding
HM-D P-F P-M P-S K-500
<< Back
Exit
Next >>

1	”Program Options - DairyMonitor” Change DairySetup system to a DairyMonitor system or run tank control in a system with HerdManager system level.
2	”Number of animal records” Select the maximum number of animals envisaged for operation. **Note!** If increasing the number of animal data records, check whether the computer has sufficient capacity as described in the section on ”System Requirements (Recommendations)”. The options selected are shown below in the ”Program Options” window.
3	”Purchase Options - DairyPlan” The window offers modules to choose from such as, for example: ”P-F” for controlling the feed boxes/calf feeders. Select the options planned for the farm. Multiple selections can be made. These options are only possible in systems with the HerdManager level (full DairyPlan version). A P-M option is not necessary to setup a milking parlour in DairySetup or DairyMonitor systems.

- Once the details have been confirmed with the ”Next” button, in DairyMonitor and HerdManager system levels, a message appears saying that the required module options are available to purchase. The program is protected by the so-called software key.

Note!

To protect its rights, GEA Farm Technologies GmbH has given DairyPlan a software key. This is used to authorize your program. Without authorization, the program can only be used to a limited extent once the introductory period has ended.

Request approval or the second software key from the specialist dealer.

The program will only be approved if the modules installed have actually been purchased.

- Confirm the instruction window.
- The installation is now complete and the following window appears:

Press the keys indicated to choose from the following options:	
A	Start the DairyPlan program or call up the main menu.
B	Request registration form (if options that are subject to a charge have been added / after a new installation).
C	End installation process.

For ”Starting out” with DairyPlan, please see
7160-90 . . -530

Upgrade to DairyPlan 21

Update an existing version of DP to DairyPlan 21.

- Start the ”Test Data Base” function.
  Correct any errors before starting the update.
- Note the number of animal data records and check whether the ”Licensing” is sufficient.
- Make a backup of the current (present) data set with the corresponding backup function in the old DairyPlan version.
  Or, the whole DairyPlan directory can be copied into a special security directory.
- End all DairyPlan programs.
- Insert the DairyPlan CD to install the upgrade.
- The installation program automatically identifies that there is already a version of DairyPlan on the system and therefore sets the installation option to ”Upgrade DairyPlan”. Confirm by pressing the ”Install” button.
- Follow the steps for ”New installation” until the ”Program installation” window appears.
- Now follow the instructions in the section on ”Installation”.

Attention!

Upgrade from DairyPlan 4 versions:
The old Dairy Plan 4 entries must be manually removed from the ”Autostart” program group.
The settings in the ”Autoexec.bat” file might have to be changed or deleted.

Update from DairyPlan C21

Replace an installed DairyPlan system with the same main version.

- Start ”Check system data records”.
  Correct any errors before performing the update.
- Backup the current data record with the backup function.
- End all DairyPlan programs including process control ”DPProcessControl”.
- Follow the installation steps until the ”Program installation” window appears. The ”Module Options” window is not shown because the installation program automatically identifies that a DairyPlan version is already on the system and therefore sets the installation option to ”Update DairyPlan”. Confirm the details by pressing the ”Install” button.
- Continue with the installation.

Online-Update

Information on DP Online Update

Free DairyPlan update files can be downloaded quickly and easily from the DairyPlan update website.

There are free online update files for the individual languages, interface card driver programs and demo data records.

Program update files can only be accessed online by customer service managers and technical dealers.
Please contact your customer service manager or technical dealer to obtain an online program update.

☞ **Note!**
A main version of DairyPlan cannot be updated with an on-line update (no upgrade)!

The requirements for an Online Update are as follows:

- Internet connection
- Internet browser

How do I carry out an online update?

- Go to the GEA Farm Technologies GmbH website in the relevant language: www.gea-farmtechnologies.com
- In the Download area, select:
  Home > Products & Services > ProFormance Milking Technology > Products > Milking/Herd Management > Software > DairyPlan C21
- Select ”Download Demo Versions and Update”.
  Another page opens offering the different update versions in different languages.

Installation of module options

The HerdManager system level (e.g. the full DairyPlan C21 version) is modular.

If, for example, a milking installation is expanded with a milk metering system, the P-M option must then be added to DairyPlan.

> ☞ **Note!**
>
> Each additional option requires a new software key. The costs of the new options are calculated by the Technical Centre or the dealer if they have not been obtained before.

This requires the following steps:

- Insert the DairyPlan CD into the CD ROM drive and start the installation program.
- The ”Program Installation” window opens. Activate the ”Module Options” field and click on ”Next”.
- Activate the new option required and confirm the details.
- Continue to follow the instructions

Language Installation

DairyPlan can be installed in various languages.
All of the languages are on the DairyPlan CD. So a language can be installed later.

This requires the following steps:

- Select installation language.
- In the ”Installation Options” dialogue box that appears later, select ”Only install languages”.

Another language can also be installed using the online update.

> ☞ **Note!**
> The language version and the DP version installed must correspond.

If the language version is newer than the installed version of DairyPlan, a program update has to be installed first (only available from GEA Farm Technologies engineers).

8.2 DairyPlan network installation

> **Note!**
> Because of the large quantities of data, the network transmission rate required is at least 100 Mbit/sec.

The DairyPlan system can be used on different computers (PCs) at the same time in a local network. Only one PC is connected to the peripherals and performs process control.
This PC is referred to below as the ”Master”.

Other PCs have access only to the database. These PCs can view and also edit data.
These PCs are referred to below as ”Slaves”.

The following should be noted for a network installation:

> **Note!**
> Installing the network (wiring and setting up the network in the PC operating system) and setting the authorizations is not part of the DairyPlan installation.
> We recommend consulting a specialist.

- Make sure that the first PC in the network, the one that starts the DairyPlan program, is the Master PC.
- Make sure that the Slave PCs have authorized read and write access to the whole of the Master PC’s hard disk.
- The Slave PC must have the Master PC’s hard drive connected as a network drive.
- The authorized drive on the master PC appears on the Slave PC as a network drive with a drive letter and details of the path (for example ”N:\DairyPln”).

At first it advisable to run DairyPlan without being connected to a network. If there are starting problems, these will be easier to solve without any complex network connections.

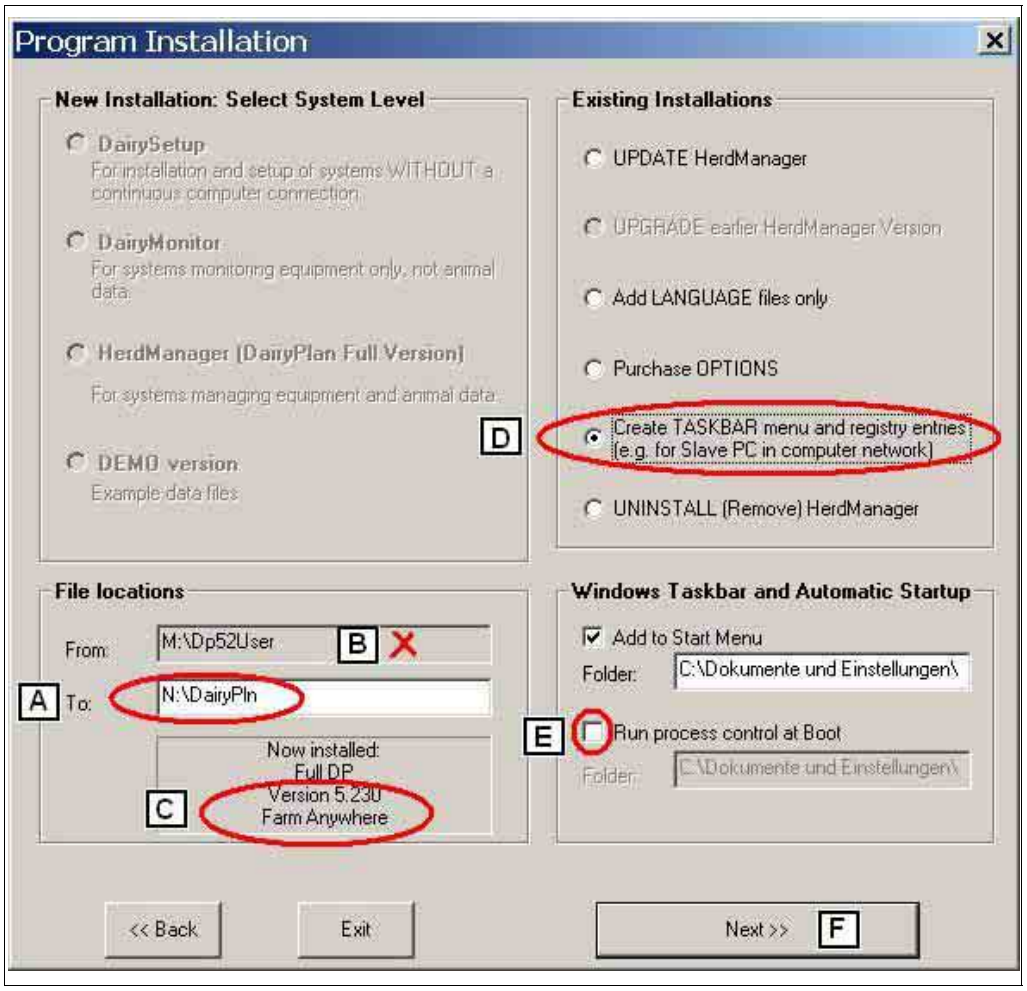
Moving on to the network can take place when the system is running smoothly with the peripherals and the user is familiar with the PC and the DairyPlan program.

Installing DairyPlan on a ”Slave PC”

The ”DairyPlan” program is installed on the Slave PC in the same way as on an individual PC.

Place the installation CD in the Slave PC’s CD drive and start installation.

The installation program will start as for a new installation because DairyPlan is not on the PC.
The following installation steps are different for installing Slave PCs in a network:



A	Change target directory: Enter the path and directory name of the DairyPlan directory on the Master PC as it will be reached through the network. **Example:** If the Master PC's hard disk is shown on the Slave PC as network drive "N:", then the entry should read "N:\DairyPln".
B	Conclude the entry of the directory name by clicking on another dialogue field. (for example on the field with the directory from which the installation is being performed.) This changes the installation dialogue and the other steps can be performed.
C	Once this has been entered, the farm's name will appear, as it is entered on the Master PC.
D	Select the "Set up start menu and registry entries" option.
E	Make sure that the "Run DPProcessControl" option is not activated for installation on the Slave PC. (this option may only be selected for installation on a Master PC!)
F	Continue with the installation.

The program start folder and the necessary Windows registry entries are created on the Slave PC.

Attention!
A new main version or a new program must also be installed on the Slave PCs so that the correct Windows taskbar entries are created for new program parts.
Otherwise it may be that individual DairyPlan programs will not work correctly.

8.3 DairyPlan licensing

Licence rights

DairyPlan 5 is protected by copyright.

To protect its rights, GEA Farm Technologies GmbH has given DairyPlan a software key. This is used to authorize the program.

Without authorization, once the input period has expired, it will only be possible to use the program to a limited extent.

Obtain authorization (software key) through the specialist dealer.

> **Note!**
> The program is only authorized if the options installed have actually been purchased.
> Only the DairyMonitor and HerdManager system levels are subject to a charge. There are no licence fees for DairySetup or a Demo version.

Approval

Approval is given either by the Technical Centre of by the dealer if:

- the serial number is the right one,
- if software key 2 has been issued.

Software key 1 / Software key 2

When is a new software key required?
Software key 2 is a coded number which is keyed in within 30 days and is always asked for if:

- a new installation has been performed.
- an upgrade installation has been performed.
- the installed module or animal capacities have been changed.
- the DairyPlan program recognises that it is running on another hard disk. This may occur if:
  - the files have been copied onto another computer,
  - the hard disk has been re-formatted, or if
  - a new version of Windows has been installed on the hard disk.

How does the software key system work?

For the first 30 days after a new installation, you can access the required part of the program and work using the ”Close” key.

After this time all of the data management program functions (e.g. list and graph display) will be blocked until the 2nd software key is entered..

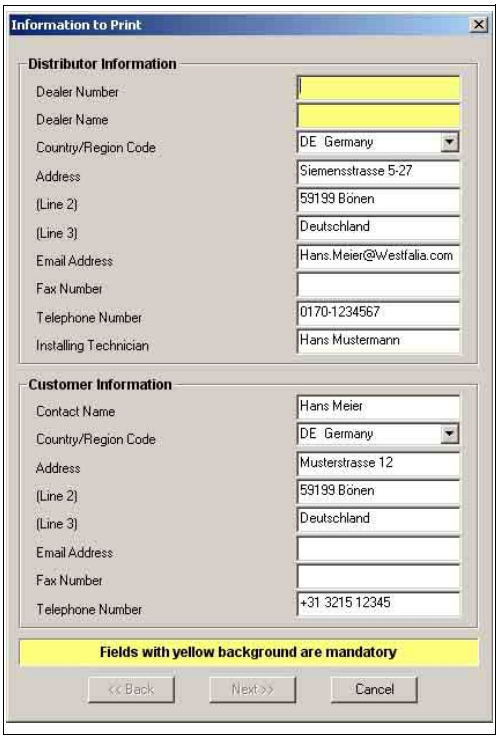
The program functions for data communication and data collection (DPProcessControl) will still be performed.

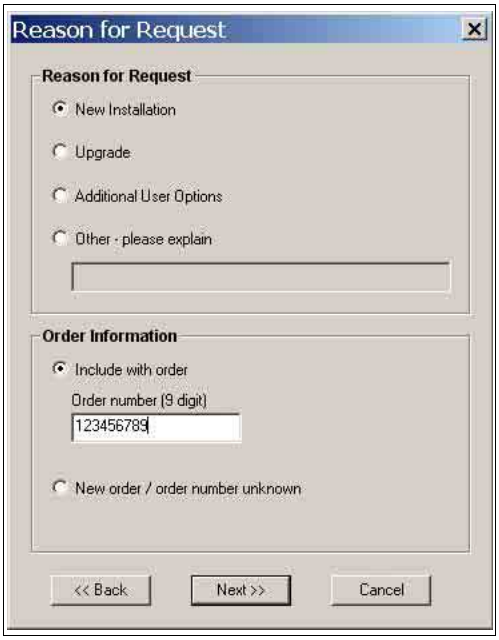
The serial number, the options installed and the 1st software key will be displayed. The 2nd software key should be entered in the empty field.

If the application is to be processed on the 2nd software key, click on the ”Process request” field.

The application is processed through this field with a corresponding form.

Entering the fax number and e-mail address is optional. However, giving them makes allocation of the 2nd software key quicker and more secure.





Note!
Obligatory fields are highlighted in yellow. Information must always be entered in these.

Application Form for Second Software Key

With the details given, DairyPlan generates the following application form. This form can be printed out directly.

If there is no printer available, in emergencies the form can also be saved in a file so that it can be printed from another PC.

Alternatively, the second software key can be applied for by e-mail to your dealer (see following explanations ”Applying for a 2nd software key by e-mail”).

Application Form

DPRegister.rtf - DPRegister

File Edit View Help

Request for DAIRYPLAN C21 Software Key

WestfaliaSurge GmbH

(as required for additional user option modules and version upgrades)

DairyPlan is protected by copyright. In order to prevent infringement of copyright, a software code system prevents unauthorized copying of DairyPlan. The "software key 2" must be entered max. 30 days after installation or by the date shown in the program. Otherwise, the management functions of DairyPlan will be blocked. Your DairyPlan distributor will give out the second software key, if this copy has been legally acquired.

Please send this data to your distributor to receive the second software key. Send it via email or print the form and sign it, and then pass it to your distributor.

Distributor Information

Dealer Number	123456
Dealer Name	Mr Knowsall
Country/Region Code	IE Ireland
Address	Canton High 25 Tullamore
Email Address	knowsall@allwork.ie
Fax Number	(123) 123456
Telephone Number	(123) 123333
Installing Technician	Mr Goodwork

Customer Information

Order/Invoice Number	New order / order number unknown
Contact Name	Mr Muchwork
Country/Region Code	IE Ireland
Address	Holdroad Drive 22
Email Address	
Fax Number	(333) 345678
Telephone Number	(333) 345677

System Information

Installation/Update Date	9 Feb, 2007
Version	5.217.330 X
Serial Number (Original)	L522M001
Purchase Options	HM-D P-F P-M P-S P-C K-120
Software Key One	7032 2229 9643 5635 4418
Software Key Two	_____ (given on receipt by WestfaliaSurge GmbH)
Reason for Request	New Installation

Signing the form confirms that the information given is correct and you agree with the conditions for requesting the software key.

The 2nd software key from GEA Farm Technologies GmbH is entered in the application form submitted and assigned to the customer through the technical centre/dealer.

On receipt the second key is entered in the entry window described above.

Requesting a 2nd software key by e-mail

On PCs with an e-mail connection, the software key can also be requested from the specialist dealer by e-mail.

- To do this, click on the envelope symbol in the symbol bar. An e-mail containing all of the necessary data and the dealer's e-mail address will be created and opened in the standard e-mail program.
- Before sending, check all of the details and especially the e-mail address one more time.

8.4 Uninstalling DairyPlan

- End all DairyPlan programs (see also section on "DairyPlan information / Ending DairyPlan").
- In Windows "Start - Programs - DairyPlan", start the "DPUninstall" program.
- Confirm deletion of all files with the button "yes - remove".
- Delete the "dairypln" directory using Windows-Explorers.

Note!
Uninstall is also possible via the DairyPlan CD. Start CD installation and select "Uninstall DairyPlan" from the menu.

9 Start-up DairyPlan

Once DairyPlan has been installed on the computer, the necessary settings have to be made.

- Start DairyPlan.
- You may be asked for a ”software key”.

For more information on this subject see section on DairyPlan licence

- To temporarily pass over entering the second software key, click on ”Close”.
- The question about the 2nd software key appears whenever DairyPlan programs or functions are started or data have been entered.
- Enter the second software key before the expiry date.

Note!

If the 2nd software key has not been entered at the right time, DairyPlan programs for evaluating data and entering data will be blocked. Process control continues to work (feeding and milking parlour control continue to work).

Base Setting

When DairyPlan is installed on the computer, the basic settings are required to control the connected peripherals.

Make or check the following settings:

- The settings in DPSetup

Note!
For a first-time installation the settings are made with the installation wizard. This goes through the settings that have to be made.

- Settings for feeding and calf feeder system (if installed)
- Settings for milking control (if installed)
- Settings for DPNet components (if present).
- Minimum input of animal records for functional test
- Setting up the Multi Port Card
- Setting up the DPNet PCI/USB interface card
- Setting up the DMS 21 GateWay

To ensure that DairyPlan starts automatically when the PC is switched on, there must be a link from DPProcessControl in the Windows Autostart directory.

Note!
The link is generally created by the installation routine.

9.1 Special personnel qualification required for initial commissioning

Initial commissioning may only be performed by specially qualified personnel in accordance with the safety instructions.

Also see the section on ”Personnel qualification”.

Special risks involved in initial commissioning:

- Electrostatic processes/interference may endanger electronic components and also lead to software faults and data loss. Back up data regularly therefore.

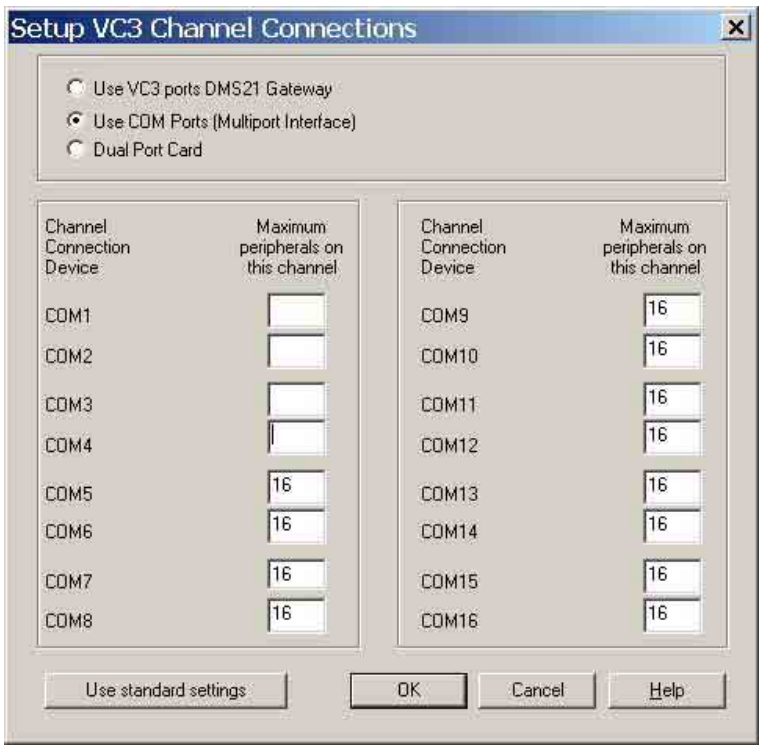
Attention!
Only touch the edge of the printed circuit board and avoid static caused for example by clothing.

9.2 Settings in DPSetup

9.2.1 Setting up the Multi Port Card with DPSetup

A few settings are required so that DairyPlan can operate with the Multi Port Card.

These are in the ”Devices -> Select interface” dialogue.



- Activate ”Use COM Ports”.
- For the channels used by DairyPlan (e.g. COM5 ... COM8), set the maximum number of devices or transceivers on that channel.
  It is generally sufficient to enter ”16” as the maximum. The number of devices actually connected may be lower.

Attention!
All channels before the first channel used by DP (e.g. COM1 .... COM4) should be set to ”0” unless they are being used for a ”Uno Port” connection.

Note!
Some of the settings for the VC3 channels will be processed when the installation settings are created with the Wizard.
However, check afterwards that these settings are correct.

9.2.2 Setting up the DMS 21 GateWay with DPSetup

From Version 0.50, the DMS 21 GateWay provides the following:

- 3 channels for connecting DPNetB controllers (DemaTron for example)
- 3 channels for VC3 units (all VC3 units **except for Metatron 12**)
- 1 channel for DPNetA devices

If a system has DPNetA devices, they must all be connected to the DPNetA channel on the DMS 21 GateWay or they must all be connected to the DPNetA channel on the DPNet PCI/USB interface card.

Attention!
DPNetA devices in an installation CANNOT be divided between the DMS 21 GateWay and the PCI-USB interface card!
It is possible to place DemaTron controllers on the DPNetB channels of a DMS 21 GateWay and all DPNetA devices in the system to a DPNet PCI/USB interface card.

A DMS 21 GateWay is essential for the following devices:

- DemaTron and DeMax
- new generation DPNetA nodes

A few older versions of DPNetA devices cannot be connected to a DMS 21 GateWay.
These devise must have a DPNet PCI/USB interface card.

DPNet devices and interface cards

Abbre-viation	Description	DPNetA or DPNetB device	Version number	
			for DPNetA proto-col, via DPNet PCI/ USB card	for DPNetB proto-col, via DMS 21 GateWay
BOA	AutoTandem box control system	A	lower than 6.0	6.0 or higher
DCR	Cluster removal in AutoRotor Magnum 90	A	lower than 6.0	-
DMX055	DeMax 55	B	-	6.20 or higher
DMX060	DeMax 60	B	-	6.20 or higher
DMT060	DemaTron 60	B	-	6.20 or higher
DMT070	DemaTron 70	B	-	6.20 or higher
FTM	Milking parlour feeding module	A	lower than 6.0	6.0 or higher
JTC	Expert tank control connection	A	lower than 6.0	6.0 or higher
MCR	Motor control in AutoRotor Magnum 90	A	lower than 6.0	-
MCR	Motor control in AutoRotor Magnum 40 / Global 90	A	-	6.0 or higher
OCR	User interface in AutoRotor Magnum 90	A	lower than 6.0	-
OPR	User interface in AutoRotor Magnum 40 / Global 90	A	-	6.0 or higher

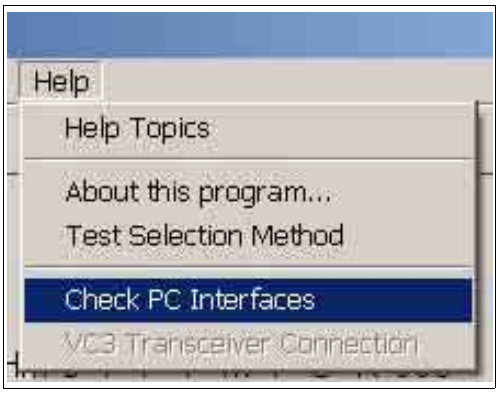
Abbre-viation	Description	DPNetA or DPNetB device	for DPNetA proto-col, via DPNet PCI/ USB card	for DPNetB proto-col, via DMS 21 GateWay
OPG	User interface in AR Capri (retaining rail via cylinder and control unit without RIO)	A	lower than 6.0	-
OPG	User interface in AR Capri (retaining rail via cylinder and control unit with RIO)	A	-	6.0 or higher
OPG	User interface in AR Capri (retaining rail via curved track)	A	-	6.0 or higher
P21/WMP	Metatron 21	A	all	Host version 2.10 or higher
PAR	Identification module in older AutoRotor Magnum 90	A	lower than 6.0	-
PBG	Retaining rail control in AR Capri via cylinder and control unit without RIO	A	lower than 6.0	-
PBG	Retaining rail control in AR Capri via cylinder and control unit with RIO	A	-	6.0 or higher
RIO	I/O control in AutoRotor Magnum 40 or some AR Capri	A	-	6.0 or higher
ROC	Rotation control in AutoRotor Magnum 90	A	lower than 6.0	-
ROC	Rotation control in AutoRotor Magnum 40 / Global 90	A	-	6.0 or higher
SCR	Rotation transmission (older AutoRotor Magnum 90)	A	lower than 6.0	-
STB	Standby module	A	lower than 6.0	6.0 or higher
TIA	AutoTandem gate controller	A	lower than 6.0	6.0 or higher
TIF	Gate controller, old (1 per row) in group milking parlours, conventional exit	A	lower than 6.0	-
TIX	Gate controller (1 for every 2 rows) in group milking parlours, conventional exit	A	lower than 6.0	6.0 or higher
TFE	FastExit group milking parlour gate controller	A	lower than 6.0	6.0 or higher
XCR	Exit controller in AutoRotor Magnum 90	A	lower than 6.0	-

VC3 units, **except for Metatron 12**, can either be all connected to the VC3 channels on the DMS 21 GateWay or all connected to a MultiPort card.

Installations with Metatron 12 CANNOT be operated via the DMS 21 GateWay.

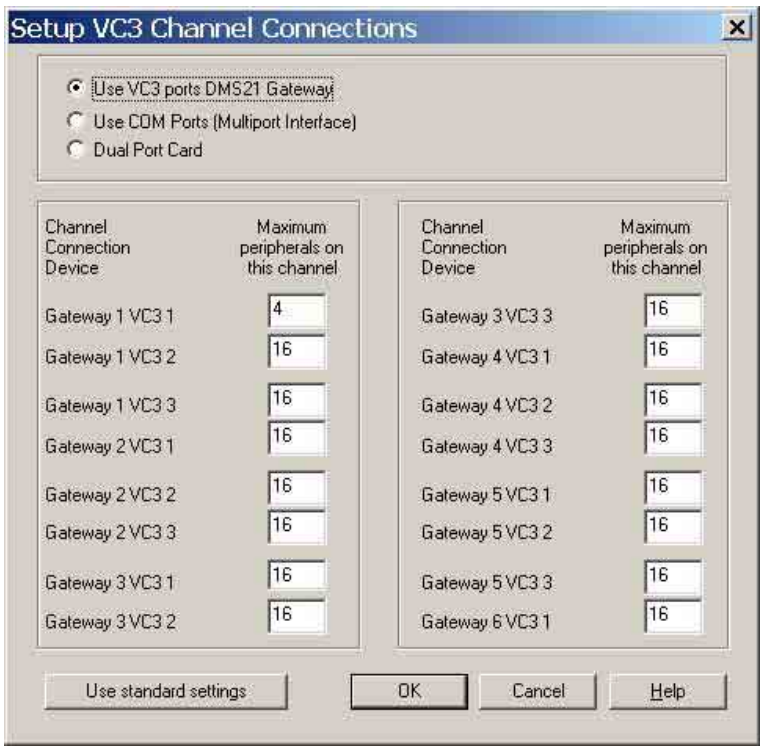
Note!
When setting up the installation settings with the Wizard in DPSetup, most of the settings for the DMS 21 GateWay will be asked for or set automatically.
Check the VC3 connection, especially if changes have been made or in the case of more complex installations.

When the interfaces have been set up manually, the function ”Check PC interfaces” in the ”Help” can be used to check the settings. Further instructions are given if there are any errors.



Settings for VC3 units on DMS 21 GateWay

If VC3 units are connected to the DMS 21 GateWay, ”Use VC3 channels on the DMS21” must be set (”Select interface” dialogue box from the ”Devices” menu):



In this example, for wiring reasons, the first four of a total of six feed stations are on the first VC3 channel, separate from the other two stations. The maximum number on the first VC3 channel is therefore set to 4. DP automatically shifts feed stations 5 and 6 to the second channel.

Note!
If a maximum number is set as zero, the corresponding VC3 channel on that DMS 21 GateWay will not be used.
If there is a change from Multiport to GateWay, it is necessary to check the maximum number of devices per channel.

The DPSetup main window below in the section on ”Wiring Assignments” shows the VC3 channel assignments.

Settings in DMS 21 GateWay for VC3

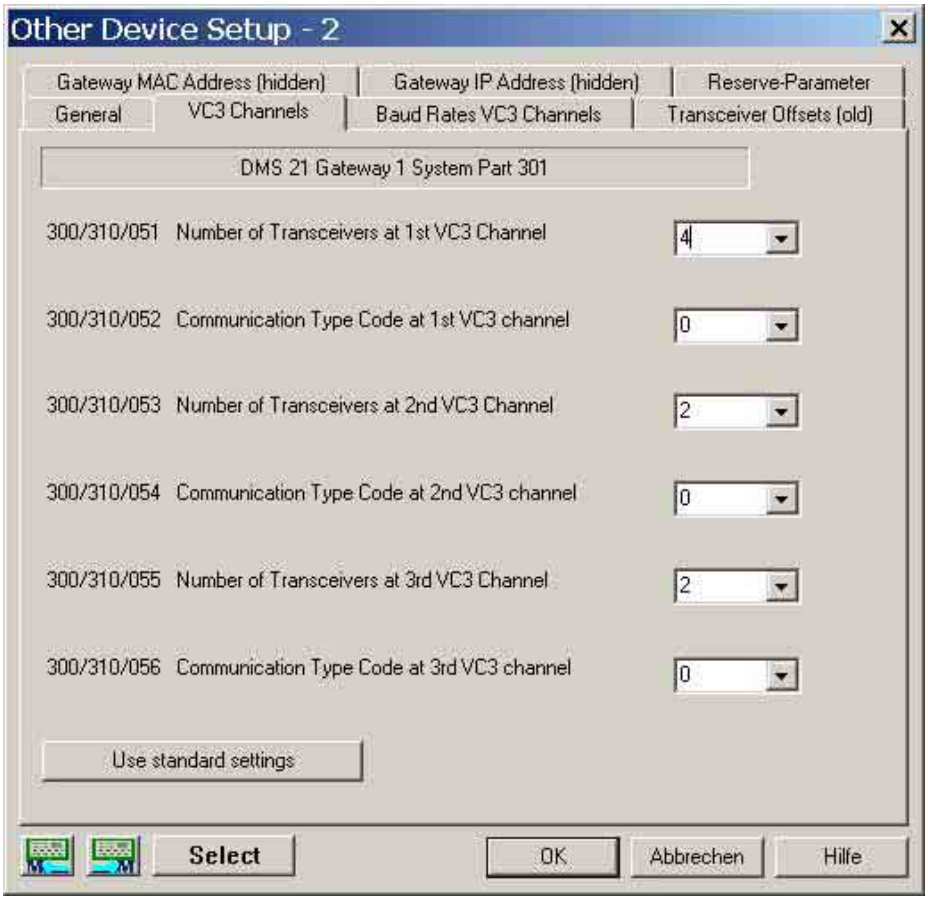
The settings for the DMS 21 GateWay are reached via ”More DPNet components” in the ”Devices” menu:

Note!
Transfer revised VC3 settings to DMS 21 GateWay
If settings for VC3 channels or Baud rates are changed, a DMS 21 GateWay installation stage has to be performed with DPNetInstall in order to transfer the changes.

- ”Network Installation” menu
- ”Address Specification” submenu
- ”Install Gateway” point

If no further node connections or network settings are changed, the other ”Address Specification” and ”Close Gateway network installation” stages do not have to be performed.

The number of transceiver units connected to a channel is set in the DMS 21 GateWay.



The code for the type of communication has to be given for each channel. With the standard methods of connecting VC3 to the DMS 21 GateWay in DairyPlan version 5.230 or higher, there should be a ”0” here.

VC3 units with Baud rate 4800

On the DMS 21 GateWay ”Baud rate VC3 channels” setup page, the standard 1200 Baud rate can be changed to the higher rate of 4800.

- The setting for the Baud rate on the VC3 peripheral must match the setting in DPSetup.

> **Note!**
> Only the latest chip versions for VC3 peripheral units support the higher Baud rate.

- The setting must be the same for all VC3 units on one channel.

If Baud rate settings are changed, they must be transferred to the DMS 21 GateWay with DPNetInstall (see note on ”Transferring revised VC3 settings to DMS 21 GateWay”).

9.2.3 Changing the connection of VC3 units from MultiPort card to DMS 21 GateWay

Farms that previously had VC3 peripherals connected to the PC with a MultiPort or UnoPort card and now have a DMS 21 GateWay can connect the VC3 units to the three VC3 channels on the DMS 21 GateWay.

Note!
If the connection is changed, all of the VC3 units in the whole farm must be placed on the DMS 21 GateWay.
For example, the VC3 units in one milking parlour cannot be on a MultiPort card and those in another milking parlour on the DMS 21 GateWay.

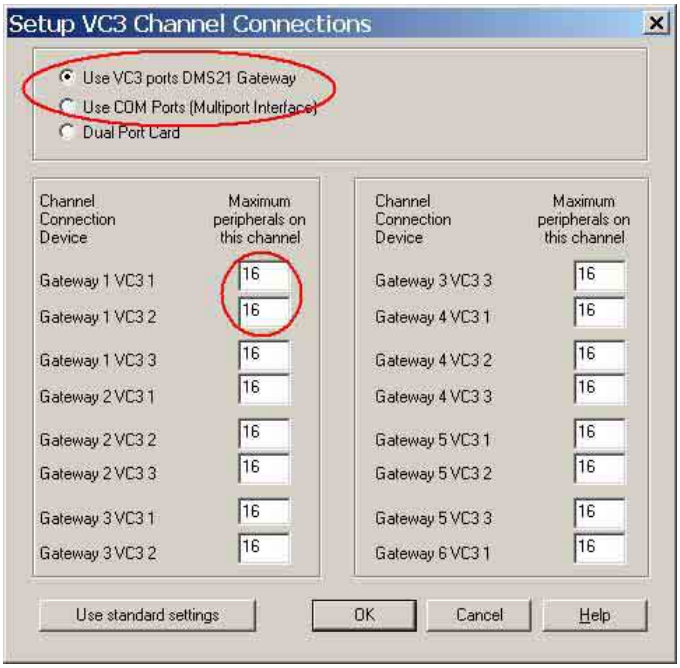
Note!
Metatron 12 cannot communicate with DairyPlan via the DMS 21 GateWay. If there are Metatron 12 units on the farm then no VC3 units can be placed on the DMS 21 GateWay.

Changing the connection

In DPSetup in the ”Devices” menu, in the ”Select Interface” dialogue box

- Activate the ”Use VC3 channels on the DSM 21 GateWay” setting.
- The first two channels on the MultiPort card are usually empty because, otherwise, they are in conflict the PC’s serial interfaces COM1 and COM2. For DMS 21 GateWay, enter a suitable maximum number so that the first two VC3 channels on the GateWay can be used.

See section on ”Setting up DMS 21 GateWay with DPSetup”.



Installing and setting up DMS 21 GateWay in DPSetup

Case 1:
There is no DMS 21 GateWay or not enough DMS 21 GateWays set up in DPSetup.

- DPSetup notices they are missing.
  - Setup error 101 is reported in the main window with the suggestion to run the ”Check PC interfaces” function.

Case 2:
There is already one DMS 21 GateWay set up in DPSetup (for example if it has already been set up for DPNet units).

- DPSetup notices that the DMS 21 GateWay does not have the right VC3 settings.
  - Setup error 102 is reported in the main window with the suggestion to run the ”Check PC interfaces” function.

In both cases:

- Call up the ”Check PC interfaces” function from the DPSetup ”Help” menu and confirm the messages.
- Answer ”Yes” to the question whether the VC3 settings in the DMS 21 GateWay should be calculated.
- The settings for all VC3 channels on all DMS GateWays in the system are overwritten.

Check VC3 settings

Information on this subject is given in the section on ”Setting up DMS 21 GateWay with DPSetup”.

9.2.4 Changing the connection of DPNetA devices from DPNet PCI/USB card to DMS 21 GateWay

From DP version 5.230, farms with DPNetA devices connected to the PC via a DPNet PCI/USB card can also connect all of the DPNetA devices to the DPNetA channel on the DMS 21 GateWay.

Note!
If the connection is changed, all of the DPNetA devices in the whole farm must be placed on the DMS 21 GateWay.
For example, the DPNetA devices in one milking parlour cannot be on a DPNet PCI/USB card and those in another milking parlour on the DMS 21 GateWay.

Note!
If there is more than 1 DMS 21 GateWay being used on the farm, all of the DPNetA devices must be connected to the PDNetA channel on the first DMS 21 GateWay.

Changing the connection

Remove the DPNet PCI/USB card from DPSetup

- In the ”Devices” menu, call up the ”More DPNet components” dialogue box.
- Press the ”Device Setup” button.
- In the ”More device settings” dialogue box, select ”DPNet PCI/USB” (by double clicking on it, or by marking the line and confirming with ”OK”).
- The DPNet PCI/USB card set up dialogue box will open.
- Press the ”Remove device” button to delete the DPNet PCI/USB from DPSetup.

Setting up a type DMS 21 Gateway PC interface

- When the dialogue box is closed, DPSetup checks the setting and notes that there is no PC interface.
  - Setup error 101 is reported in the main window with the suggestion to run the ”Check PC interfaces” function.
- Call up the ”Check PC interfaces” function from the DPSetup ”Help” menu and confirm the messages.
- Answer ”Yes” to the question of whether the controllers are connected via DMS 21 GateWay.

Installing DMS 21 GateWay with DPNetInstall

Information on this subject is given in the section on ”DPNetInstall”.

Scanning the network with DPNetInstall

- Scan the network to obtain information on the software versions to be updated.

Information on this subject is given in the section on ”DPNetInstall”.

Updating equipment software

- Update the software for all DPNetA devices.

Information on this subject is given in the section on ”DPNetInstall”.

Completing DMS 21 GateWay installation

Information on this subject is given in the section on ”DPNetInstall”.

9.3 Feed Settings

The following settings should be made in order to guarantee correct feeding.

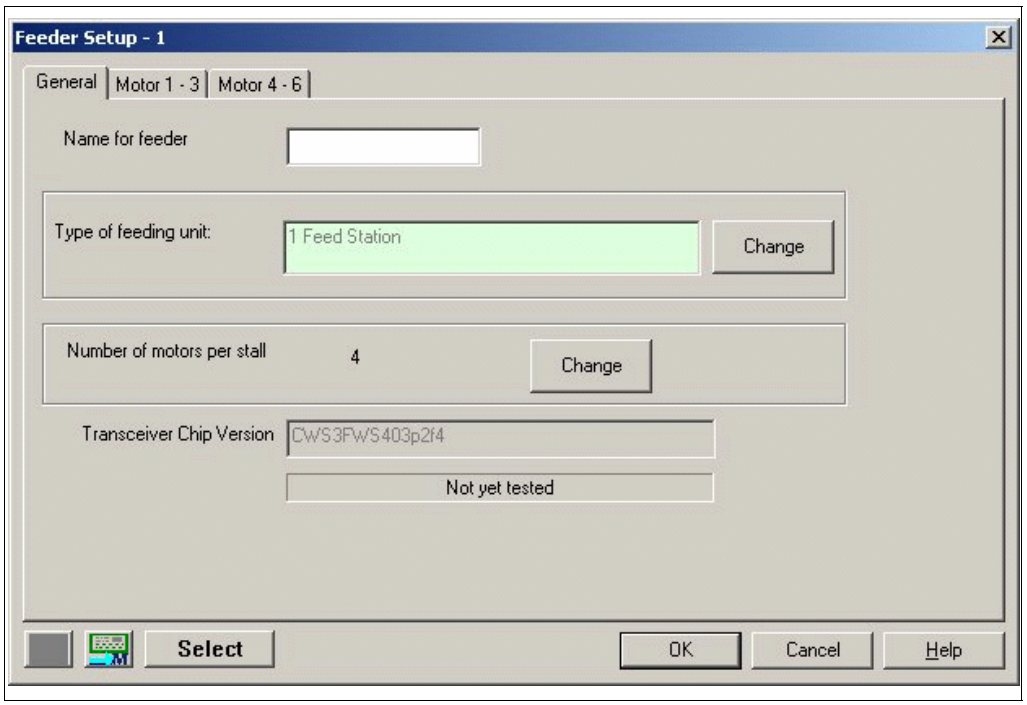
Device-specific set-up for feeding

In the menu ”Device management - Feed station set-up” first of all specify the number of stations connected (feed concentrate and drinking stations).

The following settings can be made for each feeder and feeder motor via the ”Feeder Setup” button:

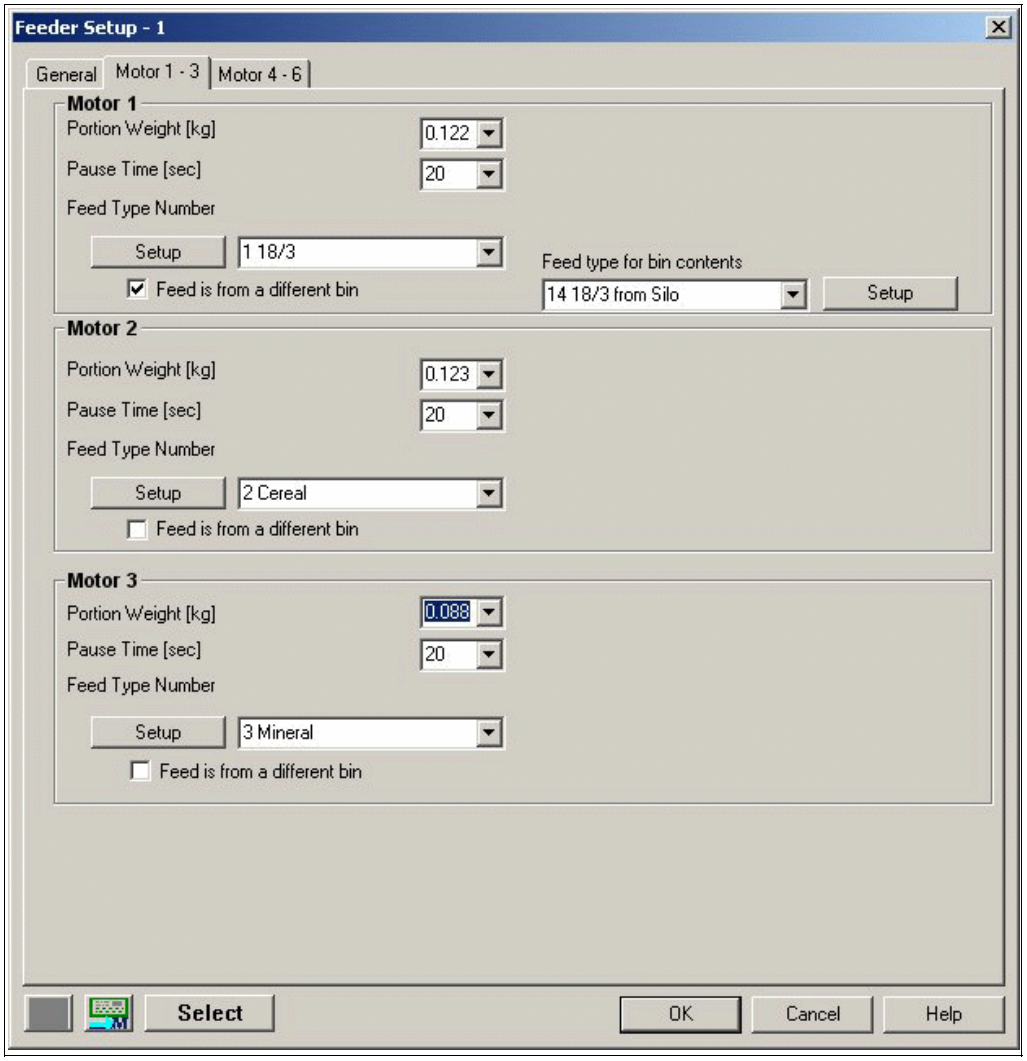
On the ”Feeder Setup - General” page:

- Type of feeding
- Number of feeder motors
- Name can be given



On the ”Feeder Setup - Motor 1-3” page or, if appropriate, the ”Feeder Setup - Motor 4-6” page:

- Portion weight
- Pause time
- type of feed allocated
- type of feed for silo
- type of feed if from another bin



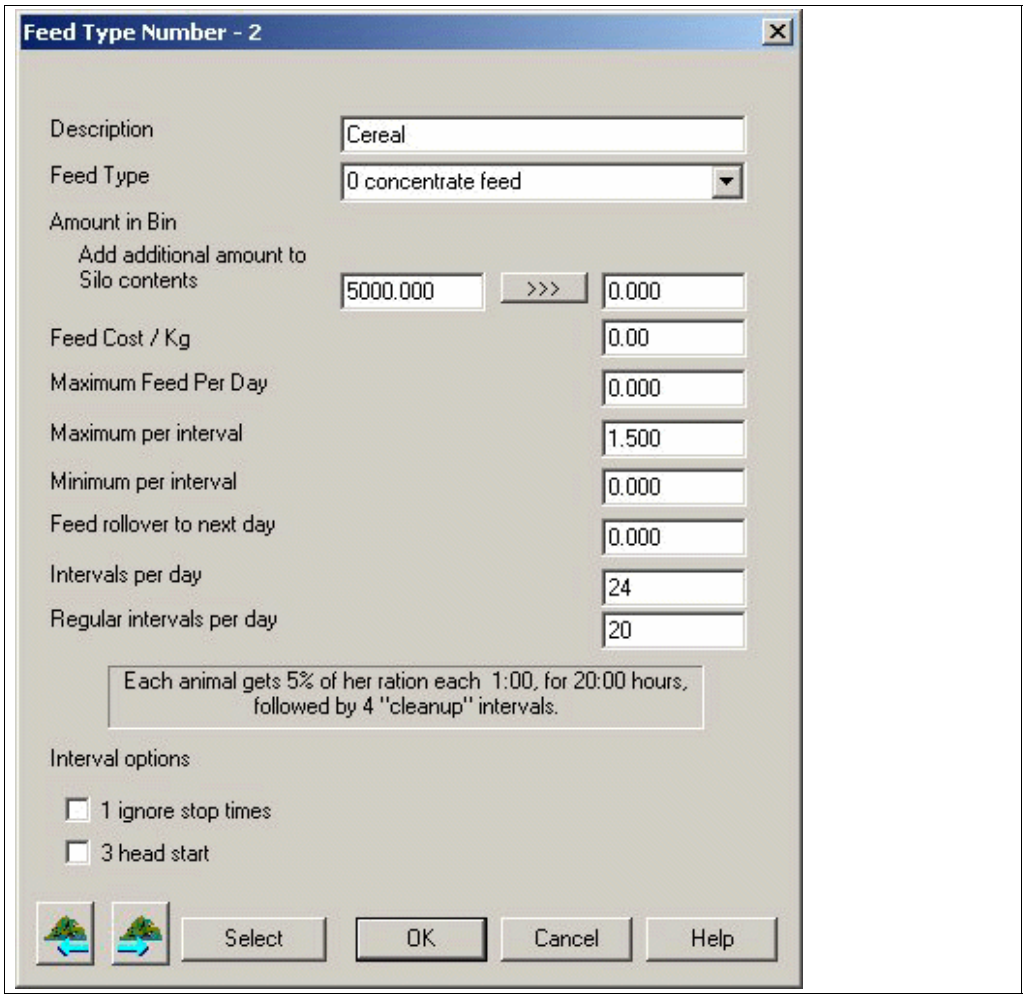
Note!
If more than three different types of feed are provided, the feed lists used by the customer might have to be supplemented.

For list processing, see manual
7160-90 . . -530

Section on ”DairyPlan Programs” - ”DPList - List Generator”.

Feed Types and Bins

Details on types of feed and interval feeding can be set up from the ”System - Feed Type Setup”.

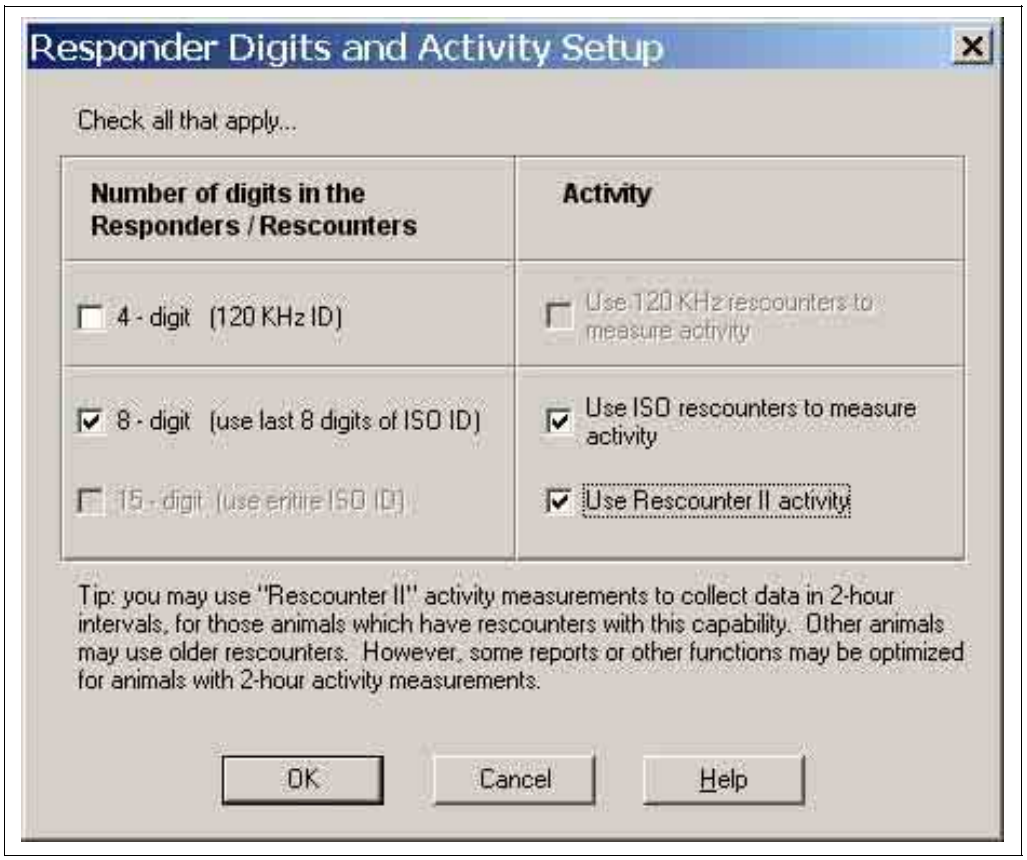


Responder settings

Menu ”Device - Responder and activity setup”

The following types of responder can be set:

- 4-figure
  4-figure X-responder and Rescounter (amplitude and phase modulated)
- 8-figure
  15-figure ISO responders (only the last 8 figures are used).
- 15-figure
  15-figure ISO responders (all 15 figures are used).


Responder Digits and Activity Setup
Check all that apply...
Number of digits in the Responders / Rescounters
Activity
4 - digit (120 KHz ID)
Use 120 KHz rescounters to measure activity
8 - digit (use last 8 digits of ISO ID)
Use ISO rescounters to measure activity
15 - digit (use entire ISO ID)
Use Rescounter II activity
Tip: you may use "Rescounter II" activity measurements to collect data in 2-hour intervals, for those animals which have rescounters with this capability. Other animals may use older rescounters. However, some reports or other functions may be optimized for animals with 2-hour activity measurements.
OK
Cancel
Help

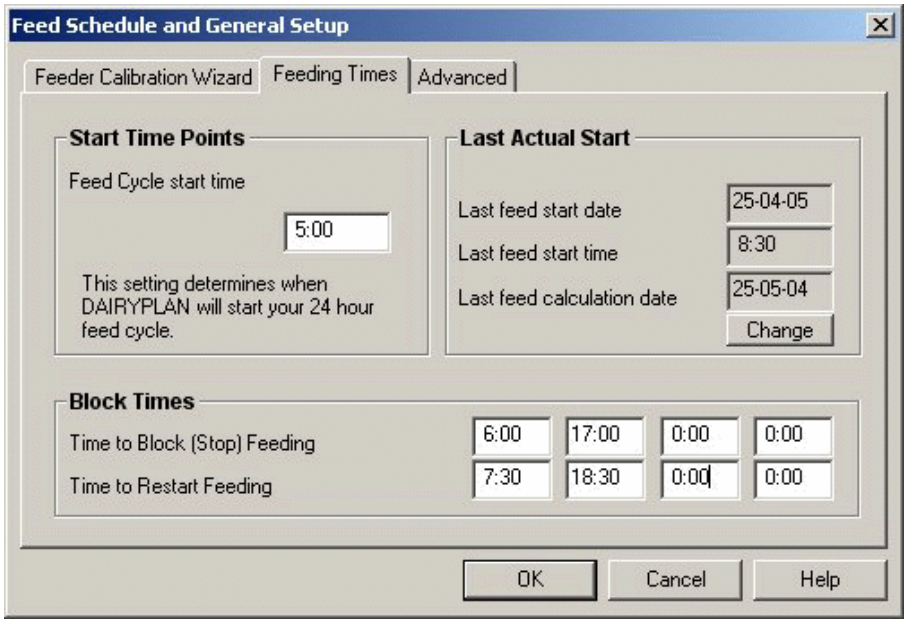
Note!
ISO responders and the Rescounter II option must be selected for activity measurement with Rescounter II.

8- and 15- figure responder types require an ISO transceiver with corresponding program chip!

If there is activity measurement and both 120kHz and ISO responders are being used, only one type of responder can be selected for activity measurement.

System-specific settings for feeding

”System - feed schedule and general setup” menu



The system-specific settings include specifications for the delivery of a test portion, feed times, settings for scanning and report files.

On the ”Feeding times” record card the ”Feed cycle start time” can be adapted to the conditions of the farm.

Determining and entering the portion weight for a feed type (Feeder Calibration Wizard)

For the following types of feeder, the portion weight for a type of feed can be found using the Feeder Calibration Wizard:

- VC4/VC3 feed stations (including Junior box)
- VC4/VC3 carousel feeders with feed screw
- Feeders in DPNet-controlled rotary parlours (AutoRotor II).
- DPNet-controlled milking parlour feeders (PF21, PF21 Basic)

Starting the Feeder Calibration Wizard

The Feeder Calibration Wizard can only be started if DPProcessControl is running.

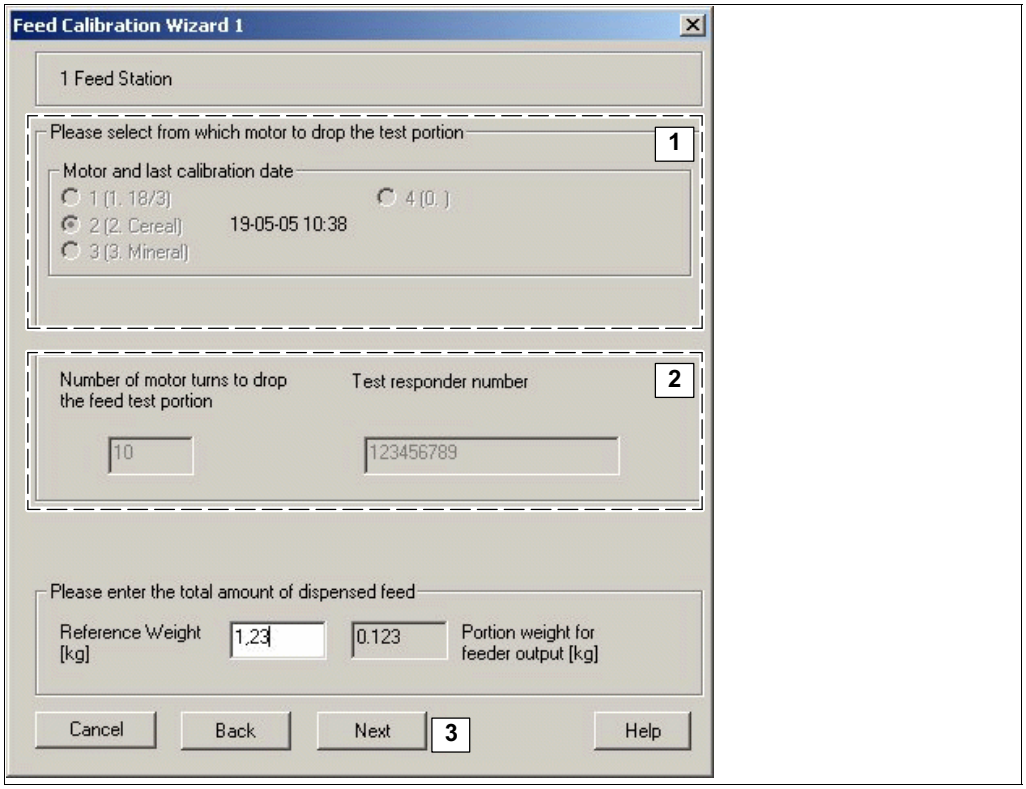
- From the main menu
  ”System”, ”Feeder Setup”, Feeder Calibration Wizard

- From DPProcessControl via:
  - the ”Extras - Feeder Calibration Wizard” menu
  - the button shown opposite

- From DPSetup
  The set-up dialogue ”General Feeder Control” (”System” menu), the ”Feeder Calibration Wizard” record card

Entering settings

For the Feeder Calibration Wizard, select the feeder for which a portion weight is to be determined.



1	Select the motor for which the portion weight is to be calibrated.
2	Enter the total reference quantity given. The portion weights for setting up the feeder motors are automatically determined from this and entered in the Feeder Setup.
3	Use the ”Next” button to go through the dialogue step by step, following the instructions.

See Online Help for details.

For VC4/VC3 feeders a test responder is used which is to be kept for the ejection of feed into the identification field.

Attention!
The test responder must never be attached to an animal because that animal would then receive unlimited feed!

Note!
If another responder is brought into the identification field during the delivery of feed, this will abort the calibration process.

Attention!
This procedure should be performed for each type of feed, each feed station and for each new delivery of feed in order to ensure correct calculation of the feed quantities!

9.4 Checking the feeder system

Note!

If no feeder system is installed, pass on to the section headed ”Testing Metatron”.

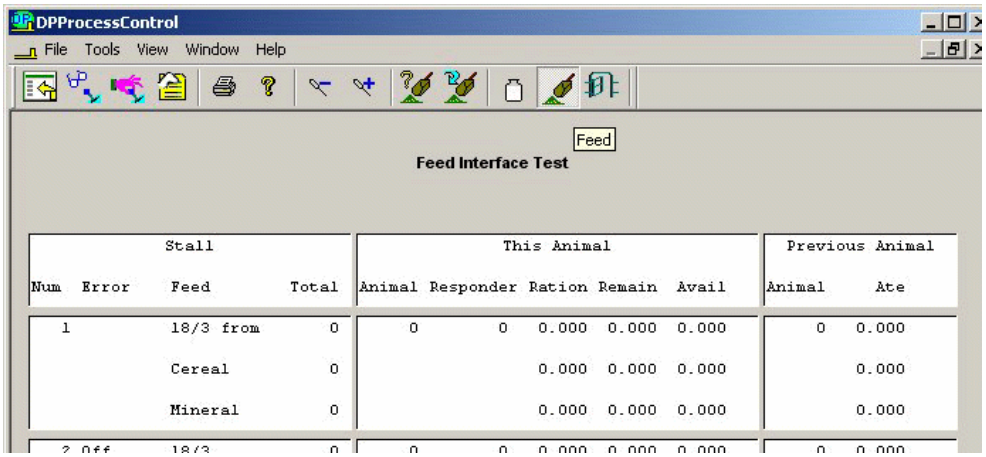
A test should be carried out to check whether all of the feed stations and calf feeders connected have the correct electrical and logical connection to the PC or DairyPlan.

If there is a connection a ”Feeder motor test” should be carried out.

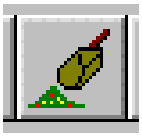
Checking the connection

- From Windows ”Start - Programs - DairyPlan”, start ”Process Control (DPProcessControl)”.
  Alternatively, in the DairyPlan main menu click on ”S-> System programs-> Process control (DPProcessControl)”.

  A process control window appears with the following tool bar (see also section on ”DairyPlan Programs / DPProcessControl”).


DPProcessControl
File Tools View Window Help
Feed
Feed Interface Test
Stall
This Animal
Previous Animal
Num Error Feed Total Animal Responder Ration Remain Avail Animal Ate
1 18/3 from 0 0 0 0.000 0.000 0.000 0 0.000
Cereal 0 0.000 0.000 0.000 0.000
Mineral 0 0.000 0.000 0.000 0.000

- The button shown opposite can be used to call up the status display for feeder stations and feeders. Errors in communication with the peripherals are shown in the ”Error” column.



- Possible error messages in the ”Error” column:

OFF	No response from the transceiver
RESPOND?	Unknown responder number
XM EOF	Transmission error (end of file not received)
XM ECHO	Transmission error (character transmitted not the same as the one sent) (Note: may also be displayed in XMMonitor is running)
XM TIME	Transmission error (the unit is not responding within the permitted time)
XM EXTRA	Transmission error (”unusual” data)
DUP ADDR	Address possibly duplicated
NO PORT	VC3/4 interface card is not working correctly
BAD	No return message from motors after starting a motor test.

Note!
Occasional error messages (especially after the system has been restarted) are not significant.
These errors often occur. Check wiring.
The faults may also be caused by defective electrical components.

Testing the Feeder Motors

- Select ”Test Feeder Motor” from the ”Actions” menu or click on the button shown opposite with the information text ”Test Feeder Motor”.
- Alternatively, the test may be performed using the Feeder Calibration Wizard. (Icon Futterkalibrierwizard.jpg)

For further information on the subject, see the manual 7160-90 . . -530

- In the following window select the feed station required. Then click on ”Start Motor Test”.
- This also checks the weight of the feed portion.

If the function test has been successful for all feeder motors and stations, you can start working with the feeding system.

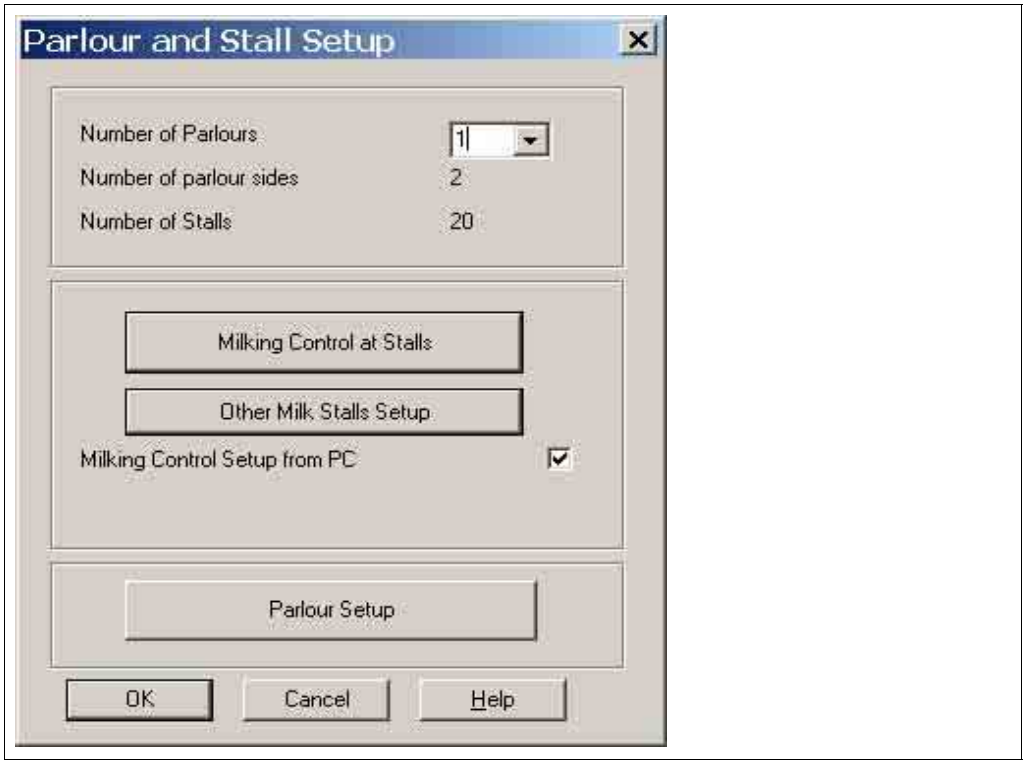
Alternatively the test may be performed using the feeding calibration wizard.

9.5 Milking Parlour and Milking Place Settings

In addition to the main settings which have been made using the Wizard, other information on the milking parlour can also be given.

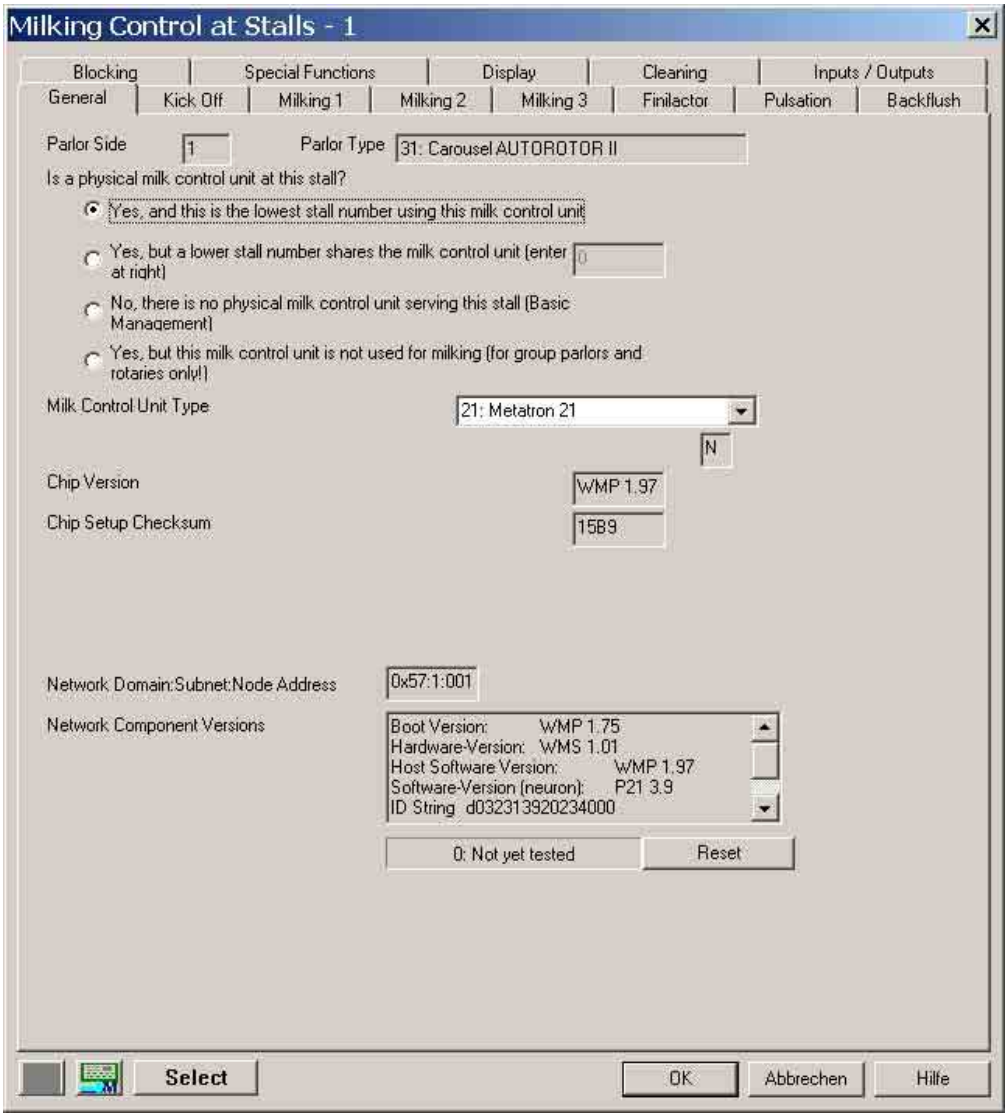
Fine settings can be made in the DairyPlan menu.
”S-> Settings-> General (DPSetup)-> Devices -> Parlour and Stall ”.

When this menu point is selected, the following dialogue box appears:



Setting milking control of stalls

This function can be used to make the farm-specific settings for the milking places and milk meters.



- The specifications can be entered for one or several milking control units (e.g. 1-5).
- Whenever the milking control unit are changed to ”Rinse” DairyPlan checks whether the setting for the milk meters in the milking parlour agree with the values entered.
- If DairyPlan finds differences between the settings in the PC and the devices in the milking parlour, the values saved in DairyPlan will be transferred to the milking controllers.

Settings for milking parlour and milking places

Most of the settings under ”Milking Parlour and Milking Place” are performed by the Wizard according to the type of milking parlour.

- To make individual settings later, start the ”Milking Parlour and Milking Place” dialogue from the ”Milking Parlour Setup” button.
- To set up the rows in a specific milking parlour, call up the first record card ”General” in Milking Parlour Setup.
  Amongst other things, this record card contains:
  - ”ID Parameter” setup (only needed for VC3 milking parlours)
    Must be set individually for each transceiver.
    In earlier versions ”ID Parameter” has also been called ”Calibration Value and Pause Times”.
  - Transceiver setup for row
    Two different rows of a milking parlour must have the same type of transceiver. In exceptional, rare cases however, one transceiver, with its own settings, may be installed for each row.
  - The ID parameters of rotary parlours that are controlled conventionally with VC4/3 transceivers are also in the settings for the (one) milking parlour row.

More details in Online Help.

9.6 Checking the milking parlour units

Note!

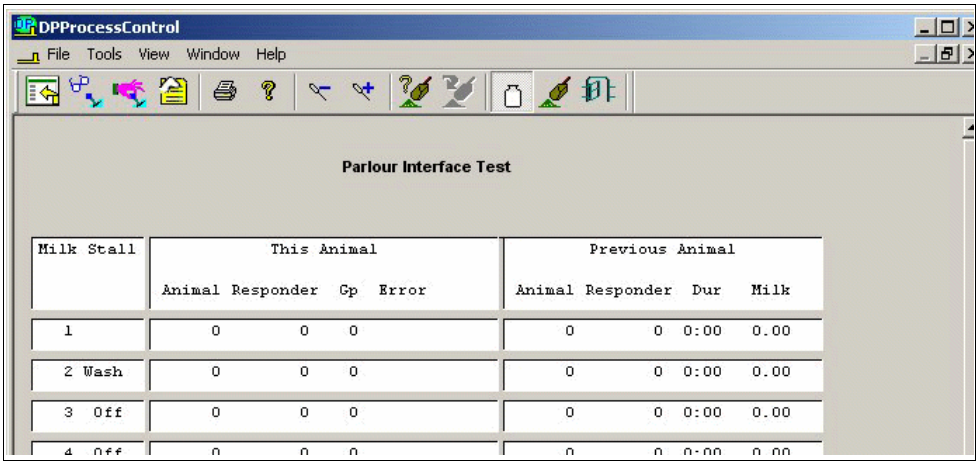
If there are no milking parlour units, please continue with the section on ”Minimum DairyPlan Settings”.

A check is performed as to whether all of the milking control units and milking places have the correct electrical and logical connection to the PC and to DairyPlan.

With regard to Metatron 12 milking parlour control units:
If there is a connection, individual devices can be switched off and on with the main switch in order to check the addressing of the devices.

Checking the connection

- From the DairyPlan menu, click on ”S-> System Programs-> Process Control (DPProcessControl)”.
- A process control window appears with the following toolbar.


DPProcessControl
File Tools View Window Help
Parlour Interface Test
Milk Stall
This Animal
Animal Responder Gp Error
Previous Animal
Animal Responder Dur Milk
1 0 0 0 0 0 0:00 0.00
2 Wash 0 0 0 0 0 0:00 0.00
3 Off 0 0 0 0 0 0:00 0.00

- Click on the icon with the ”Milking control unit” info text in order to list milking control units.
  The status of communication between the peripherals and DairyPlan is shown in the ”Error” column. If everything is working correctly, the ”Error” column will be empty, otherwise an error message or the status of the devices will be shown.

- If no equipment is displayed you must check to see if the system is set to measure milk yield.
- In conjunction with Metatron:
  If milking has been performed without a connection to the computer, remove the bridge from the ”DS” to ”-” data lines on the Metatron connection card.
- Switch on the vacuum pump.
  If some or all units display ”OFF” for more than three minutes, proceed as described in the Section entitled ”DairyPlan Programs”; ”DPPORT - Help Program”.

Note!

The fact that Metatron 12 displays ”OFF” when the vacuum pump is not running is not a fault.

Testing a METATRON 12 - device

> **Note!**
> The test described does not apply to Metatron P21/S21!

The previous test showed how the electrical connection for the Metatron devices is checked. This next ”check” can be performed if, for example, two Metatron devices are mixed up because their addresses are incorrect. This also checks the logical connection.

- Switch some of the Metatron units off at the main switch.
- In the ”Error” column, the changes must be identified at the correct units. If not set the address correctly.
- This completes the check on the Metatron units.

Possible error messages in the ”Error” column:

ID Off	No response from ID (S/E switched off?)
COW# ?	Unknown animal ID received
MATCH ?	Animal ID and milk quantity do not match
REPEAT?	Animal has already been milked at another milking place
1111?	Unknown responder number 1111
XM EOF	Transmission error (end of file not received)
XM ECHO	Transmission error (character transmitted not the same as the one sent)
XM TIME	Transmission error (the unit is not responding within the permitted time)
XM EXTRA	Transmission error (unusual data)
DUP ADDR	Address may have been duplicated
NO PORT	Dual-Port card is not working correctly
ID ADDR	ID address may have been duplicated
ID PORT?	Interface card is not working correctly for identification
MAN ENTR	Manual milk entries not permitted on Metatron

9.7 Minimum entry of animal records (for functional test)

Once the PCs and peripherals have been connected, the animal data have to be entered.

To check that the system is operating between three and ten animals have to be entered, depending on the size of the installation.

For further information on the subject, see the manual 7160-90 . . -530

Entering Information on Livestock

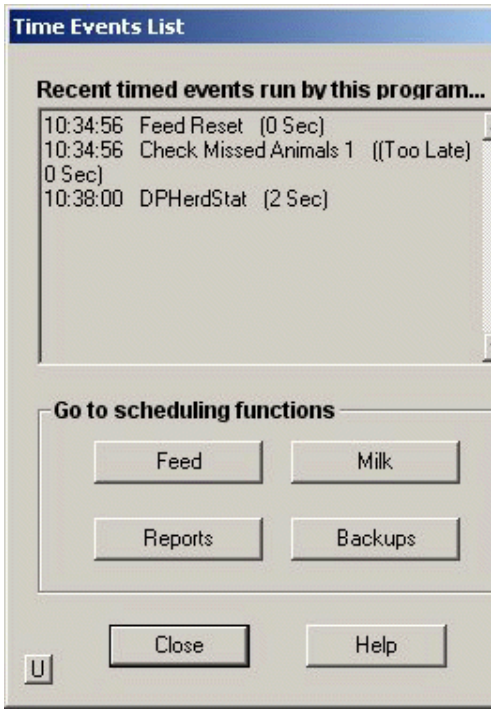
Enter new animals with ”DPMenu -> Animal Data -> Manage Animals ->Save”:

To run the installation the following minimum entries are absolutely essential:

for cows / goats / sheep	for young animals
Animal ID	Animal ID
Responder number	Group ID number
Group ID number	Date of birth
Date of birth	
Last birth date	
Lactation number	

9.8 Automatic functions

In DPProcessControl, in the menu ”Actions-> autom. functions” exact details must be given on the functions that are to be performed automatically (see ”Installation Report”).
For more information press ”F1”.



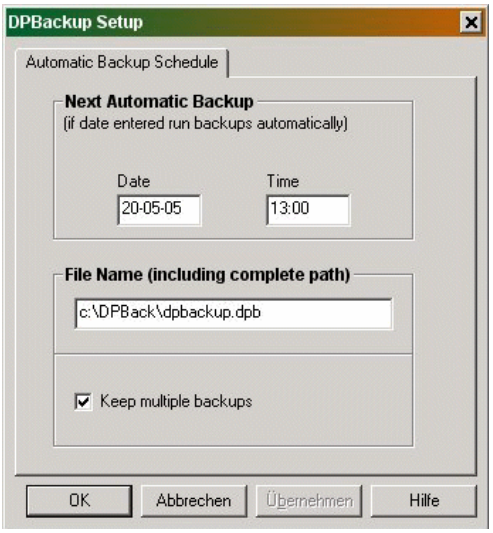
- Feed-> Feed times:
  Enter a suitable start time for the feeding cycle.
- Milk:
  Enter the milking times. The actual milking times must be within the times set.
- Autom. reports:
  Select or enter reports which are to be printed automatically at specific times.

> **Note!**
>
> DairyPlan provides a number of pre-set lists in the directory ”dairypln - FactOrig - XX (= language that has been installed and set)”.

Examples of monitoring lists:

Report name	Recommended printing time	Purpose
Feed monitoring	after start of feed	Feed monitoring
Observe	daily / weekly	Heat monitoring
Heifer about to calve	weekly	Calved heifer overview
Animals due to calve	weekly	Calving overview
Vet action	weekly	scheduled vet action
Unidentified animals in the milking parlour	Post milking	Animals with no milk quantity
Conductivity value and milk alarm	Post milking	Conductivity value and milk monitoring
Activity monitoring	2 daily	Activity monitoring

- Back-up:
  Enter the time and filename (including path) for the scheduled file back-up.
  The data is then saved at the time specified every day.



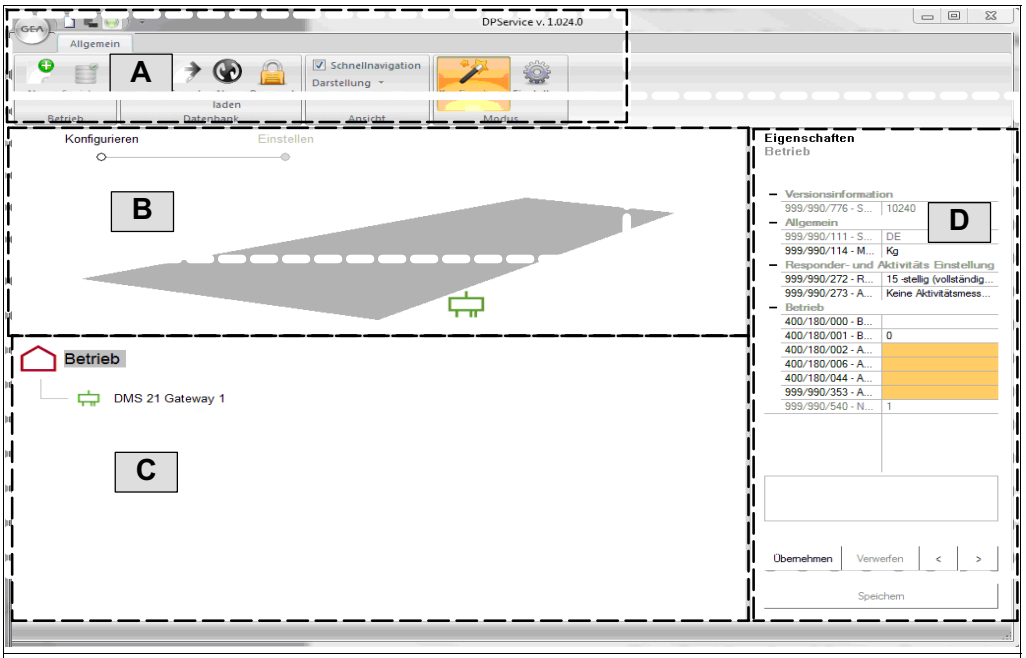
10 DPService

DPService is a program that dairy farms can use to create and set up all of their corresponding devices and components. The graphical interface not only makes it easier to configure new dairy farms, it also enables the user to import, display and edit operating data that have already been created, from the DairyPlan database.

Start the DPService program

10.1 User interface

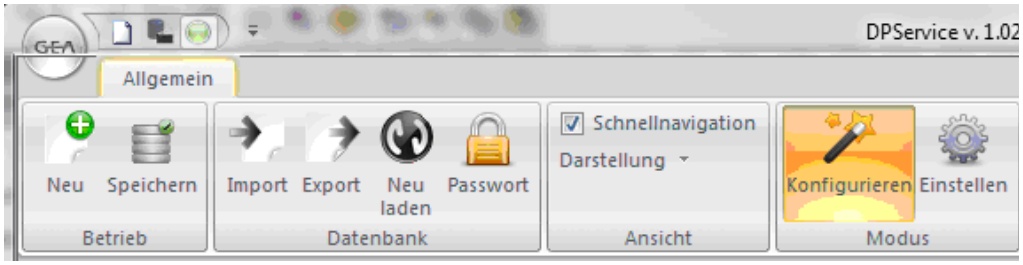
The user interface is divided into different areas representing different program functions and providing interaction.



Example: View of a new farm

A Functional area

In the current version of DPService, the function area includes a configurable icon bar, the ”General” tab and menu bar. More tabs will be added in future versions.



Functional area version 1.026

Symbol bar

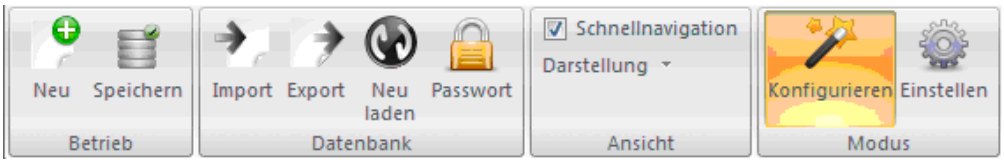
In the symbol bar click on an icon in the menu bar, the illustrated functions can be performed. The displayed dropdown menu right above the icons can either be shown the symbol bar above or below the menu bar.

General

Clicking on the ”General” tab, the menu bar can be fade in and out.

Menu bar

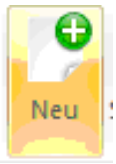
The menu bar is divided into the following DPService functions:



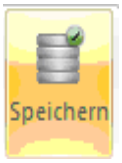
Farm details

This menu is for creating new farms and storing the operating data entered.

- New
  An ”empty” milking parlour is created. Any data saved for a previously created milking parlour will be lost. The devices and components of the new milking parlour have to be created again (configured and set up).



- Save
  Saves the current milking parlour configuration in the DairyPlan database. This function can be executed from the icon in the menu bar and also from the ”Save” button in the properties area.



database

- Import
  This function is used to import a configuration file that has already been created.

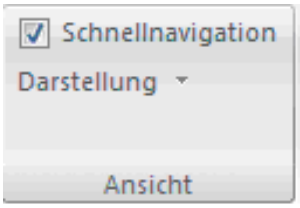
- Export
  Saves a configuration with any name in the file system, not in the DairyPlan database. The configuration can then be sent to Technical Support for example.

- Reload
  The configuration stored in the local DP database is re-imported. Any settings that have not been saved at that time will be lost.

- Pass Code
  Protects the operating data entered against unauthorized access by third parties. The pass code can consist of up to 13 alphanumerical characters. The pass code also applies to the settings in DPSetup.

View

- Quick navigation
  The graphical overview of the farm created can be displayed and hidden again by a checkbox in the Graphics area.
- Description
  The background colour can be changed from white to black with a dropdown menu.



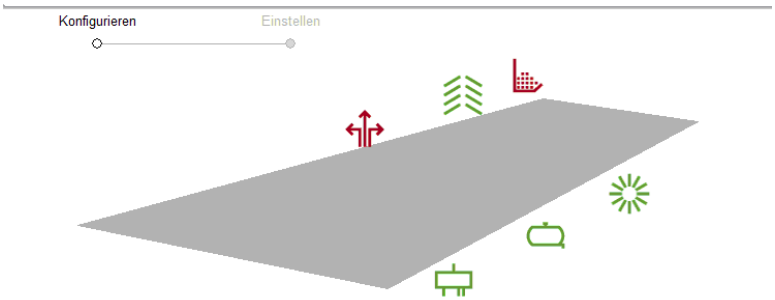
Mode

- Configure
  All of the components in a newly created farm must first be defined in full in the Properties area (configured).

- Setting
  When all of the components have been defined (the corresponding icons are green), if necessary more parameters can be adjusted in the Properties area. However, because the configured components already have standard parameters, this is only necessary if there are any system-related deviations from the standard parameters.

B Graphics area

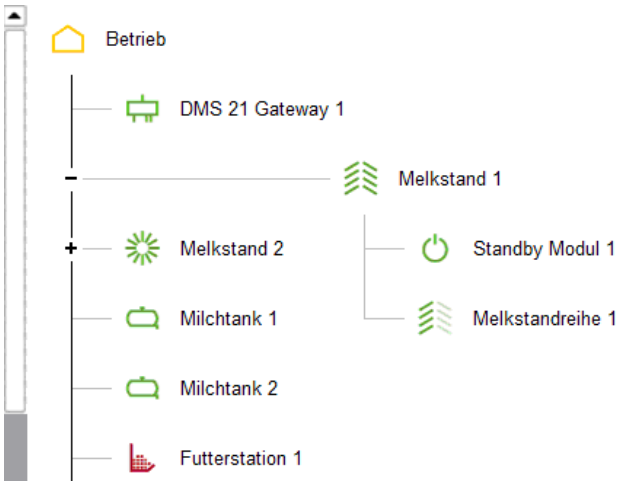
The Graphics area is for quick navigation. The icons shown here can be used to select faulty components directly with a click of the mouse and show the corresponding Properties area without having to laboriously search for them in the tree structure of the Components area.



Grafikbereich, Version 1.026

C Components area

In the Components area, all devices and components in a created milking parlour are displayed hierarchically in a tree structure.



Komponentenbereich, Version 1.026

Component groups

In the Components area the devices belonging to a milking parlour are displayed in groups in a tree structure.

Clicking on the plus sign in front of a component icon (milking parlour example), or double clicking on the milking parlour icon, expands the component tree.

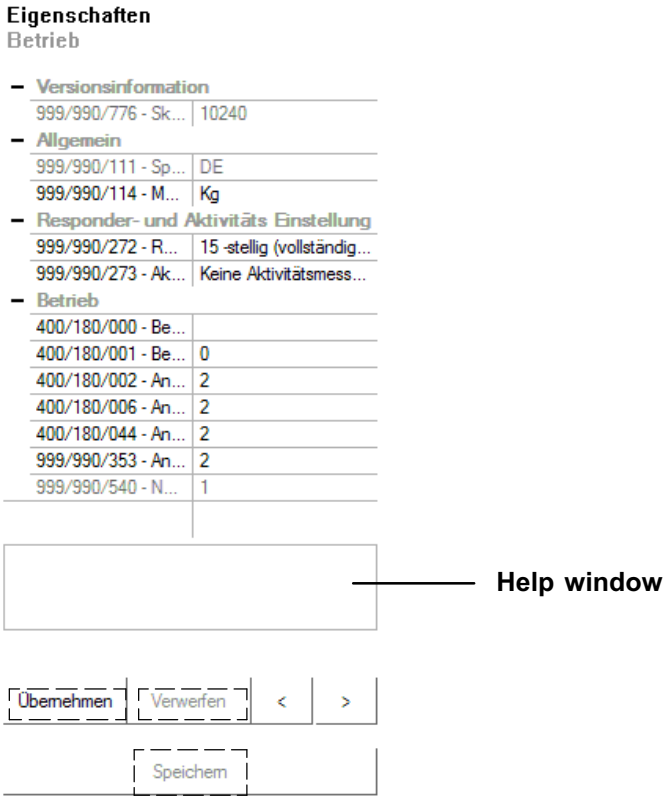
There will be a minus sign in front of the component tree that is opened. Clicking on the minus sign closes the tree.

Call up the DPSetup dialogue window

In the component tree, for a few components (e.g. feed station), the corresponding dialogue window in DPSetup can be called up by clicking on it with the right mouse button. This is so that herd management data can be processed quickly. For direct access, it is necessary for the data to be stored in the database and for the components to be in ”Set-up” mode (see description of the Mode function area).

D Properties area

In the Properties area, depending on the mode selected, the basic configuration (configuration mode) and the parameter settings (set-up mode) of the operating components can be displayed and edited. Grey fields are for information only and cannot be edited. The input fields to be configured are highlighted in yellow.



Eigenschaftsbereich, Version 1.026

Data entry

To facilitate data entry, in some windows, predefined configuration data can be selected from a dropdown menu. Other data must be entered by hand. The completed entry can be confirmed by clicking on the ”Accept” button or deleted with ”Reject”.

Only when there is data in all of the necessary input fields will the colour of the icon for the corresponding component turn green and the component data can be saved in the DP database. Any values that differ from the standard values will be subjected to a logical check. If a value is above or below a valid range, the last valid value saved for the farm in the database will be used. If there is no suitable value in the database, the standard value will be selected.

Multiple selection

If a milking parlour has several of the same kind of device, (milking controllers, feeding systems, etc.), these can be selected from the component tree together and configured as follows:

A With the right mouse button click on the milking parlour or milking parlour row icon and choose ”Select all milking controllers”.

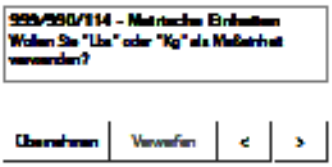
As with Windows file manager, either:

B Click on the first and last device group while holding down the SHIFT key and select all of the groups in between, or:

C Hold down the control key (Ctrl) and select the device groups individually with the left mouse button.

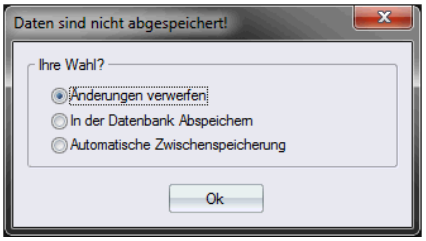
Help text

For each component selected, help text appears at the bottom of the Properties area above the buttons.



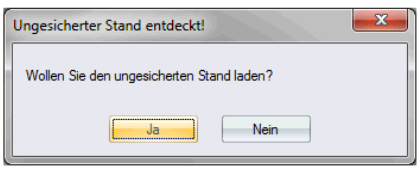
Automatic data save

If the DPService program is ended without first saving the edited data, a popup window appears to say that the data have not been saved. The user can then either reject the changes, save them in the DP database or save them with automatic temporary buffer storage.



With buffer storage, the data are saved in the file ”Autosave.sav” in the DPService program folder. However, the file should not be edited manually because otherwise it might not be possible for it to be loaded when DPService is started again.

When DPService is restarted, the program checks whether there is an Autosave file in the buffer. The user can then decide whether to load the last unsaved status from the buffer or the last saved status from the database.



Save

Once all of the components have been configured and set up, the operating data must be saved in the DairyPlan database. To do this, select the ”Save” icon in the menu bar or click on the ”Save” button at the bottom of the Properties area.

Note!
If new data are to be saved for later use and not stored in the database, they can be transferred to a file with the ”Export” option.

The saved data are stored in the DP database and can be transferred in the next step (open DPSetup and start DPNetInstall).

For more information on this subject, please refer to the section: ”DP Setup”.

10.1.1 Symbols

In the graphics and components area, operating areas and components are represented hierarchically by the following icons.

Farm details	
	Farm details
	Operating areas
	Gateway / PC connection
	AutoRotor milking parlour
	AutomTandem milking parlour
	Group milking parlour
	Automatic milking systems (MIone)milking parlour
	Components
	Control panel
	Milking controller
	Standby module
	Other components / controllers
	Milking parlour row group milking parlour: one-row ready for operation
	Milking parlour row (AutoTandem): one row ready for operation. The icon is the same for the right and left-hand row
	Milking parlour row (AutoRotor)
	Milking box (MIone)
	Selection
	Scales
	Feeding
	Tank controller

Operating status

The operating status of each operating area and each component is indicated by one of three colours.

- Green
  All of the fields for the component and all of the fields in the subordinate tree structure have valid values. The component is ready for operation
- Yellow
  One or more subordinate devices still have empty fields. But the component has been filled out completely.
- Red
  Some fields for the component are still empty. The component is not ready for operation.
- Milking parlour type not defined.
  Once the required milking parlour type has been selected, the icon shown on the right changes to red operating status for the milking parlour selected.

10.2 Creating a new farm

To create a new farm, one row of basic settings must first be entered and the operating areas and their components set up.

Start DPService

Call up the program with the DPService icon in the DairyPlan user interface.

Um einen neuen Betrieb anzulegen müssen zunächst einige Grundeinstellungen vorgenommen und die Betriebsbereiche und deren Komponenten eingerichtet werden.

1. Under mode, select the option ”Configure”.

2. Under ”Farm” click on the option ”New”.

3. The ”Farm” and ”Gateway” icons are now displayed in the Components area.

Create operating areas

1. Select the ”Farm” icon. The corresponding input fields appear in the Properties area of the user interface.

2. Enter the number of operating areas.
3. Eingaben übernehmen.
   Once the settings have been accepted, the icons appear for the operating areas created.

10.3 Creating components

The ”Create components” procedure is the same for the individual operating areas and is described here with one example.

1. Select icon (example: milking parlour).

2. Enter the corresponding milking parlour details in the fields that appear in the Properties area.
3. Confirm each entry with ENTER or by clicking on the ”Accept” button.

   Other input fields open with a yellow background.

> **Note!**
> In group and AutoTandem milking parlours, the number of milking places is entered for each row.

4. Repeat the procedure until all of the input fields have been completed and the details accepted.
5. When the entry is correct and complete, the icon turns green.

6. Create components for all other operating areas.
7. Save configuration in the DairyPlan database.

Update software and specify addresses (DPNetInstall)

For all of the components that have been created, the software now has to be updated and a device address specified.

- Starting DPNetInstall

> For more information on this subject, please refer to the section on: ”DPNet Installation”.

Provided no entries have to be made that are different from the specifications, the milking installation is now ready for operation with the factory settings.

> For more information on this subject, please refer to the section on:
>
> ”Setting up components”.

10.4 Setting up components

The setting up of component parameters is the same for the individual components and is described here with the example of a milking controller.

1. If not already active, change to ”Set-up” mode.

2. In the Components area, navigate to the **Components** to be set up.
3. Select the ”Milking controller” icon.

   Input fields appear in the Properties area.

Note!
It is possible to select multiple components with the mouse. (same as Windows Explorer)
- Specific selection by holding down the ”Ctrl” key
- Mark range with the Shift key

4. Adjust settings individually.
   Input fields appear in the Properties area
   Example:
   - Threshold for removal (050/040/010)
   - Number of pulses (050/020/010)
5. Accept and save settings.
6. Repeat the procedure until the components in all of the operating areas have been set up.

Send the settings to the components (DPNetInstall)

The individual settings must now be sent to the components.

For more information on this subject, please refer to the section on ”Installation DPNet”.

The milking installation is then ready for operation with the individual settings.

10.5 Adding to farms

Operating areas and components can be added to an existing farm.

The ”Add to farm” procedure is the same for operating areas and components and is described below with one example.

1. Start DPService.
2. In the Components area navigate to the components to be set up.
3. Click on the **Farm** icon.
   The corresponding input fields appear in the Properties area.

4. Change number of Expert tank controllers.
5. Accept settings.
   The icon appears in the Components area
6. Save settings.

Note!
Alternatively, to add a component, proceed as follows:

7. In the Components area, navigate to the operating area.
8. Select operating area
   (e.g. milking parlour)
   Input fields appear in the Properties area

9. Add component
   (e.g. automatic stripping unit)

Update software and specify addresses (DPNetInstall)

The software has to be updated for the components that have been created or expanded, and a device address specified.

For more information on this subject, please refer to the section on Starting DPNetInstall

The milking installation is ready for operation with the settings selected.

For more information on this subject, please refer to the section on Setting up components

Note!
Once a farm has been set up in DPService and the details saved in the database, the devices created must be given an address via DPNetInstall.

11 DPNet Installation

11.1 DPNetInstall

> ☞ **Note!**
>
> DPNetInstall is included on the DairyPlan installation CD from Version 5.100.

The DPNetInstall program is for installing and commissioning DPNet networks and modifying them in the event of any version-related hardware or software changes. Various settings are made for DPNet devices.

DPNetInstall also offers the following functions:

- Scanning the network in order to find out the current status of the installation.
- Updating of the equipment software by transferring Neuron and host software.
- Displaying component information.

Only when all of the connected devices have been correctly installed is the milking parlour fully functional. Thanks to the installation process, communication becomes possible between the individual devices and between the individual devices and DairyPlan.

The following steps need to be taken in order to operate a DPNet network:

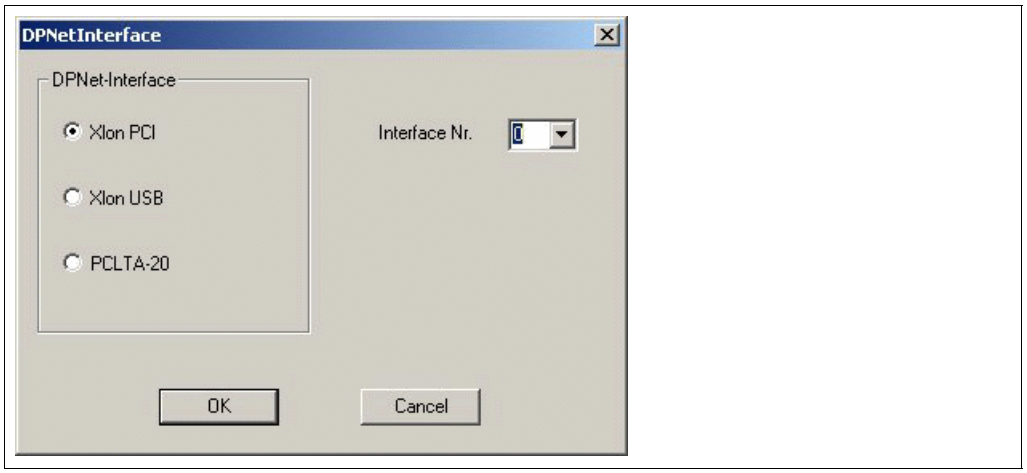
- Install DPNet equipment in the installation as well as the cabling required (see relevant user manual and assembly instructions for the equipment).
- Install DairyPlan on PC.
- If necessary, fit a Multiport card and install drivers.
- If necessary, fit DPNet Interface PCI or USB and install DPNet driver software.
- Make milking parlour settings with DPSetup/DPService.
- Configure network card in the PC.
- Enter settings in DPSetup for DPNet.
- Start the ”DPNetInstall” program.
  - Install Gateway.
  - Download device software (gate control only or other applications that are based on the hardware of a gate control card).
  - Close Gateway network installation.
  - Download other devices.

Start program for the first time

The DPNetInstall program can be started as follows after installation:
- Directly from this DairyPlan directory
- From DPSetup under the menu ”Devices->DPNetInstall”

Special features of the initial start-up process

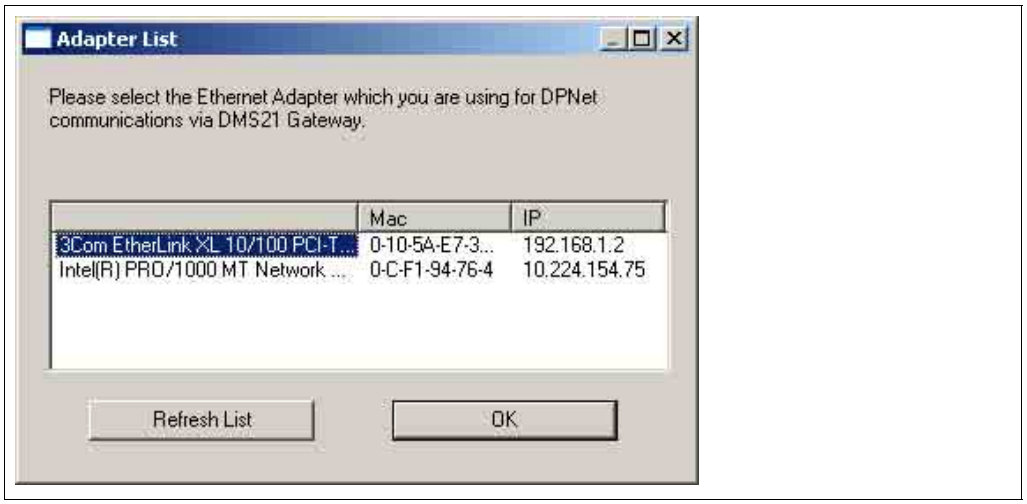
The window shown below opens automatically when the program is started for the first time (only if there is a DPNet-PCI/USB interface card).



The following details on the DPNet interface have to be entered here once:
- DPNet interface: ”Xlon PCI”
  In exceptional cases, it may be necessary to select a different interface.
- Interface no.: ”0”
  The first card fitted has the number ”0”.
- If ”PCLTA-20” is selected, the number ”1” should be entered for the first card fitted.

The following selection dialogue box will be displayed when devices in the DPNetB network are triggered for the first time via a DMS 21 GateWay.

Note!
The GateWay must be connected to the PC and to the power supply for the corresponding network card to appear in the dialogue box.

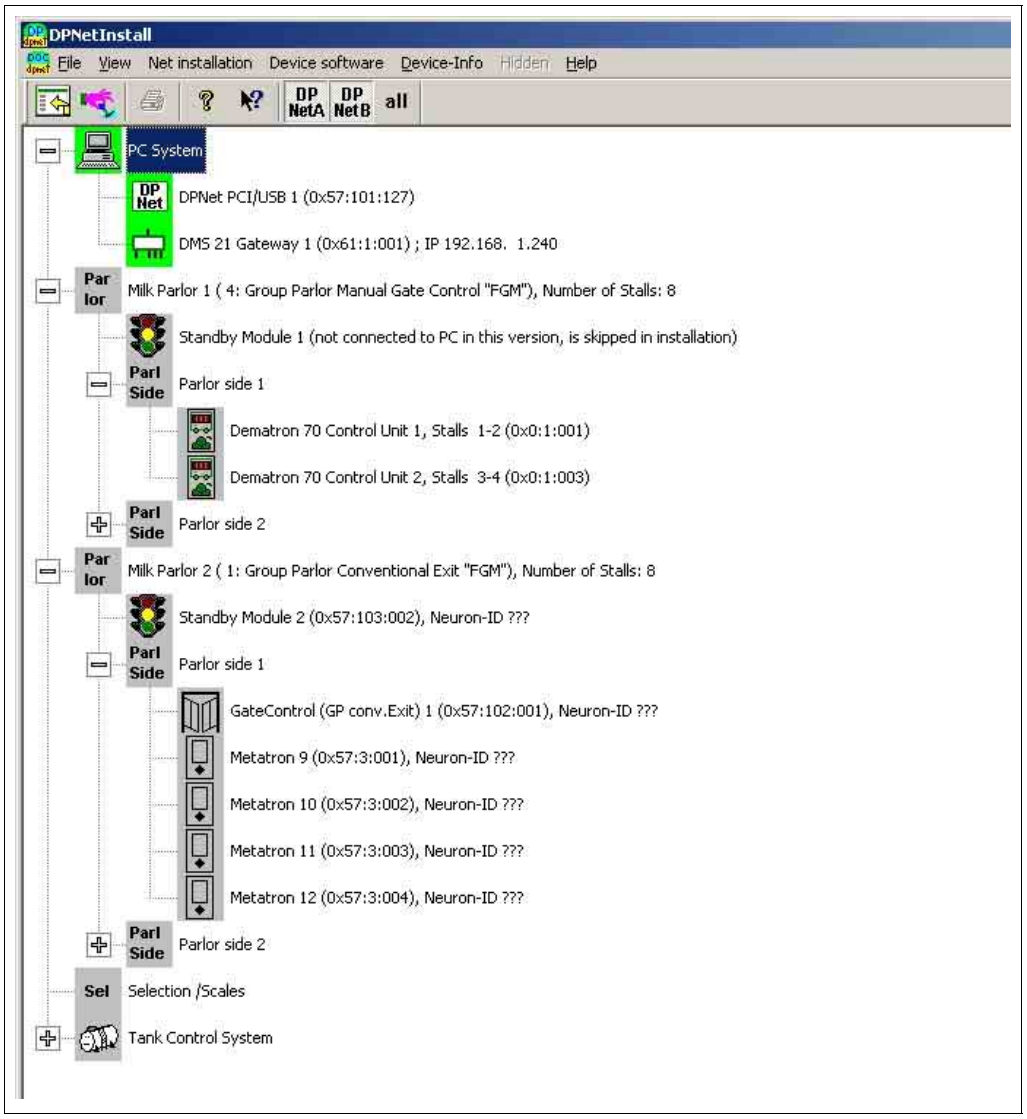


The network card that is to be used for data traffic via the DMS 21 GateWay should be selected here.

Then install the DMS 21 GateWay via Network Installation ->Address Specification->Gateway. Only then will communication be possible with the DPNetB devices.

During the start-up procedure the program window appears showing the installation tree resulting from the information given in DPSetup.

Because their status is still unknown the devices will be shown in grey or red.


DPNetInstall
File View Net installation Device software Device-Info Hidden Help
DP NetA
DP NetB
all
PC System
DP Net
DPNet PCI/USB 1 (0x57:101:127)
DMS 21 Gateway 1 (0x61:1:001) ; IP 192.168. 1.240
Par lor
Milk Parlor 1 (4: Group Parlor Manual Gate Control "FGM"), Number of Stalls: 8
Standby Module 1 (not connected to PC in this version, is skipped in installation)
Parl Side
Parlor side 1
Dematron 70 Control Unit 1, Stalls 1-2 (0x0:1:001)
Dematron 70 Control Unit 2, Stalls 3-4 (0x0:1:003)
Parl Side
Parlor side 2
Par lor
Milk Parlor 2 (1: Group Parlor Conventional Exit "FGM"), Number of Stalls: 8
Standby Module 2 (0x57:103:002), Neuron-ID ???
Parl Side
Parlor side 1
GateControl (GP conv.Exit) 1 (0x57:102:001), Neuron-ID ???
Metatron 9 (0x57:3:001), Neuron-ID ???
Metatron 10 (0x57:3:002), Neuron-ID ???
Metatron 11 (0x57:3:003), Neuron-ID ???
Metatron 12 (0x57:3:004), Neuron-ID ???
Parl Side
Parlor side 2
Sel
Selection /Scales
Tank Control System

The PC (PC system) shown in the tree must be highlighted in green.

Only then will a DPNet interface have been identified and correctly set up.

If the icon is red, check the settings in ”Network Installation->Interface-Setup”!

Program symbols

The following pictograms might appear in the tree for example.

	Gate control		Box control unit		PC
	DemaTron		Metatron		Stand-By
	Close/open directory				

Here, the background colour provides information on the installation status.

Background colour		**Example**	
green	Installation OK		DPNet Installation-Metatron Interface O.K.
grey	Installation incomplete - Install device (address specification).		Metatron installation Metatron incomplete. Install device (address specification).
red	Installation incorrect - Note the information shown for the device!		Gate controller installation incorrect. Note the information shown for the device!

11.2 DPNet network installation / Update

Requirements

- DairyPlan/DPNetInstall are installed.
- The DPNet PCI/USB interface, including driver and/or the Ethernet network card for connecting the DMS 21 GateWay, is installed and configured.
- The equipment for the DPNet network which is to be put into operation, (eg a milking parlour or a feed box unit), must be assembled in the milking parlour and connected to the DPNet interface of the PC.
- Settings have been entered in DPSetup for DPNet.
  Before the network can be installed the installation has to be configured in DPSetup. To do this start the Wizard with ”DPSetup->Wizard->Start”.
  Once all the forms have been filled in, the milking parlour is configured and DPNetInstall can be started up.

Installing/updating

In order to install or update a network, the following points are to be carried out in the order specified:

Note!

The installation described is restricted to essential components.
If necessary, detailed information/instructions on the points can be taken from the section entitled ”Installation steps”!

- Start up the DPNetInstall program
  - Directly from this DairyPlan directory
  - From DPSetup under the menu ”Devices->DPNetInstall”

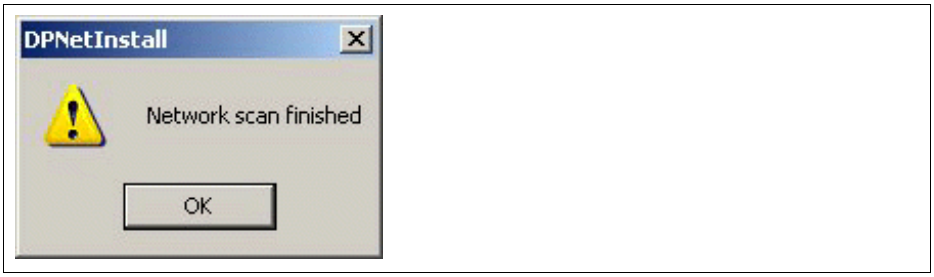
GateWay installation for DPNetB installations.

Note!
In the case of a network installation that needs more than one DMS 21 GateWay, note that, when installed for the first time, the address specification for the GateWays takes place individually, one after the other.
Any others should be switched off in order to avoid address conflicts. Only one DMS 21 GateWay should be connected to the network for first-time installation.

- Assign addresses to DPNet devices

Attention!
Please follow the relevant user manual for the device when installing DPNet equipment! (eg for Metatron)

- Print out the installation tree (to help with installation)
- In the „Network installation" menu, choose between „Address assignment->All" (Installation of all devices) and "Address assignment->Single" (Installation of single devices).
- Send the PIN to DP for each device one after the other (in the order shown in the installation tree).



- After sending the PIN, wait for the „signal" from the device (eg Metatron will flash 3 times).
- Next device.

- Download equipment software (for new device or update).

Note!

With a first-time installation a Neuron download only has to be performed for the gate / box control unit because the software has to be adapted specifically for the milking parlour.

- Select the gate control unit to be installed from the tree (background colour red or grey).
- In the ”Device Software” menu, select ”Neuron Processor”.
- Call up the device with Service Pin (first-time installation).

Choose Query Type
Do you want to query devices by selecting a device at the PC, or by pressing the Service Pin?
Tree
Service-Pin
Cancel

Attention!
During initial commissioning, call up the device using the Service PIN!
(see corresponding user manual for the device).

- The program will propose the correct software automatically.
  If necessary, a message will appear indicating that the latest software version is already available.
- Carry out the download.
- Download the next device.

- Download more updates

> **Note!**
> With a first-time installation a Neuron download only has to be performed for the gate / box control unit because the software has to be adapted specifically for the milking parlour.

- Select the device to be installed in the tree (background colour red or grey).
- In the ”Device Software” menu, select ”Host/Application Software”.
- Call up device from tree (update).

Choose Query Type
Do you want to query devices by selecting a device at the PC, or by pressing the Service Pin?
Tree
Service-Pin
Cancel

> **Attention!**
> During initial commissioning, call up the device using the Service PIN!
> (see corresponding user manual for the device).

- The program will propose the correct software automatically.
  If necessary, a message will appear indicating that the latest software version is already available.
- Carry out the download.
- Download the next device.

- Complete installation
  (only for installations with DMS 21 GateWay)
- Scan network
  Once all devices have been linked up, a final check will be carried out on the network.
  If installed correctly, all pictograms will have a green background!
- Close program
  ”Close” in the ”File” menu

> **Note!**
> Once the devices have been installed, finally check the settings on the device and retransmit if necessary!

The installation/update is complete.

11.3 Installation procedure

11.3.1 Assigning addresses to DPNet devices (network installation)

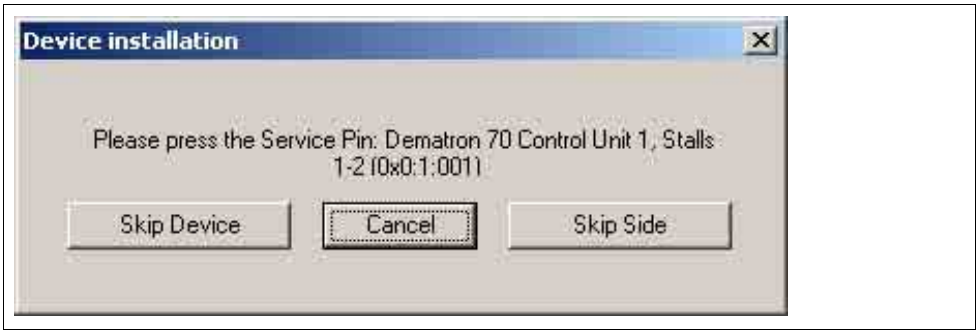
Attention!
Please follow the relevant user manual for the device when installing DPNet equipment! (eg for Metatron)

When installing the system, each device will be allocated an address in the network and the devices will be configured.

First of all, install all the DPNet devices within an installation.

Installation procedure

- In order to ensure that the individual Service Pins are sent in the correct order, you can print out the installation tree to help you by clicking on ”File -> Print”.
- In the „Network installation” menu, choose:
  - „Address assignment->All” in order to install all the devices in the tree.
  - ”Address assignment->Single” in order to install a single device selected
- Send the Service Pin from each device to DP one after the other (in the order of the installation tree).


Device installation
Please press the Service Pin: Dematron 70 Control Unit 1, Stalls 1-2 [0x0:1:0011]
Skip Device
Cancel
Skip Side

Attention!
Make sure that you send the Service Pin for the right device as otherwise this will cause malfunctions in network communications.

- After sending the Service PIN wait for the device to „Wink” (e.g. Metatron will flash three times).
  If this does not happen, then check progress on the PC.

- Continue with the next device until all the devices have been installed. After installing the last device, a corresponding message will appear in DPNetInstall.

Attention!
When all of the device addresses have been specified the installation must be completed again.
This is performed through Network Installation-> Address Specification-> Complete Gateway Network Installation.

- Scan the network

11.3.2 Downloading equipment software

DPNetA devices work with a neuron processor (Metatron 21 with neuron and host), on which any relevant software has to be installed.

- for first time installation
- for an update

For several areas of application, a standard control module, supplied with universal DPNetA software, is used.

Only when the right equipment software is downloaded will this control module become e.g. an AutoTandem box controller.

DPNetB devices have bootloader and application software.

The bootloader software makes it possible to update the application software.

The type of download will depend on the processor for the DPNet device used to run the equipment software.

- Neuron/bootloader software
  Network processor used to run programs for single devices.
- Host/application software
  Processor used to run additional programs for complex devices (Metatron 21).

The following table shows which devices have which software

DPNet device		Neuron / bootloader	Host / application
DemaTron	DMT	X	X
DMS 21 GateWay	GWA	X	X
Standby	STB	X	
Stall gate controls (different types)	TIX / TFE / TIA	X	
Box control unit		X	
Metatron P21	P21 / WMP	X	X
Metatron S21	P21 / WMP	X	X
Motor control unit	MCR	X	X
Control panel	OCR	X	
Exit Control Rotary	XCR	X	
Revolution cntr	ROC	X	
Cluster removal	DCR	X	
Place control unit	PBG	X	
Control panel	OPG	X	
Milking parlour feeding module	FTM	X	
AutoRotor I/O control	RIO	X	
AutoRotor user interface	OPR	X	
Expert tank control connection	JTC	X	

Download process

Note!
With a first-time installation a Neuron download only has to be performed for the gate / box control unit because the software has to be adapted specifically for the milking parlour.

- Select the device to be installed in the tree (background colour red or grey).
- In the menu ”Equipment software”, select the menu point ”Neuron processor” or ”Host processor” (host only for Metatron).
- Call up device

Attention!
During initial commissioning, call up the device using the Service PIN!
(see corresponding user manual for the device).

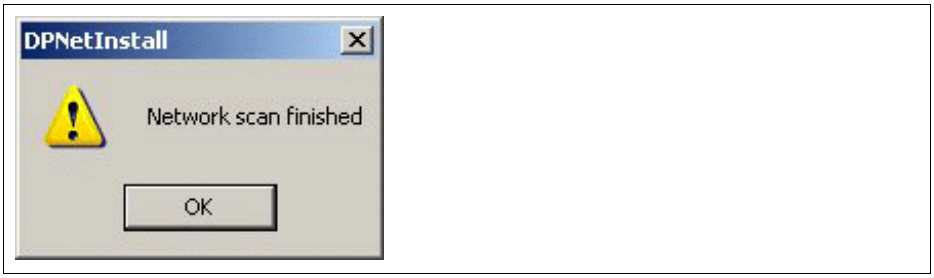
To do this select whether the device should be called up via the tree or by pressing Service Pin.

Choose Query Type
Do you want to query devices by selecting a device at the PC, or by pressing the Service Pin?
Tree
Service-Pin
Cancel

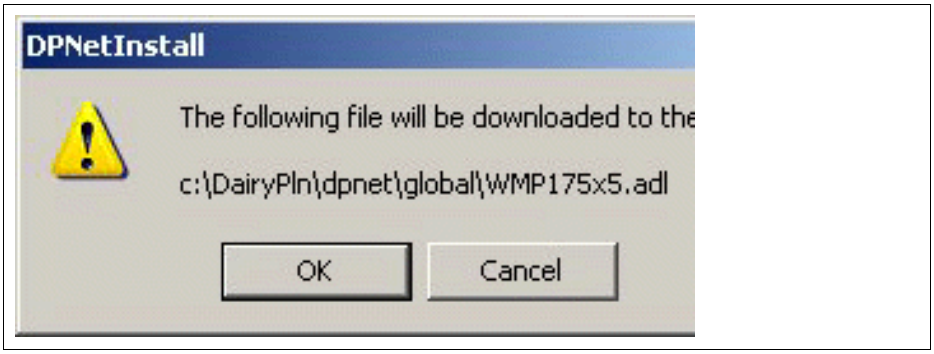
- ”Service-PIN” for first-time installation and update
  Is released on the device and sent to DPNetInstall.

  DPNetInstall will wait for the Service Pin for the device

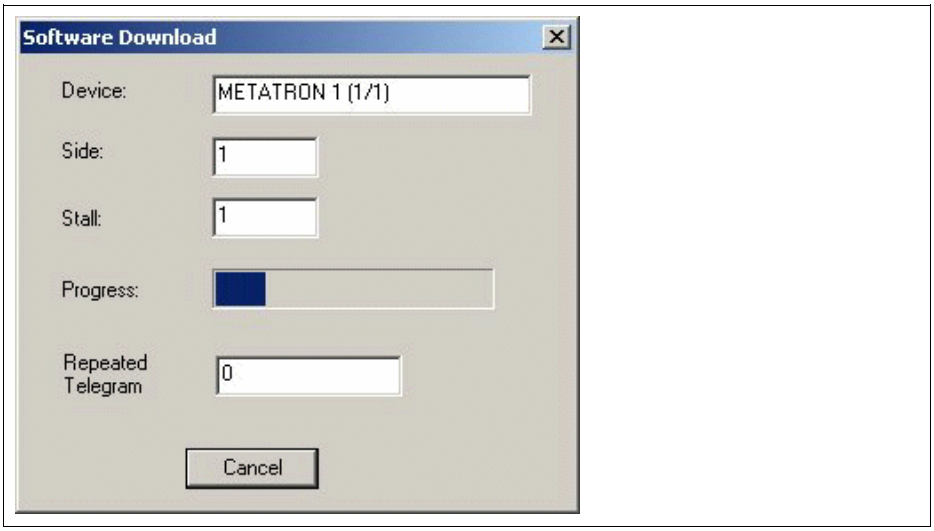
  When the service pin is actuated, the display will show which file is being transferred.



Press ”OK” to confirm and transfer the software to the device.



When the host software is downloaded a progress display appears because in this case there is a lot more data to be downloaded than for the neuron software.



- ”Tree” - only possible for an update (devices already installed)
  The whole process can be operated directly from the computer.
  You only have this facility if the device selected has already been installed in the network.

  After pressing the ”Tree” button, the file to be transferred will be displayed. Press ”OK” to confirm.

- The program will propose the correct software automatically.
  If the current version is already installed on the device, a message will appear indicating that no download is necessary.
- Carry out the download.
- After the Neuron software has been transferred, the device will have to be re-installed. DPNetInstall will do this automatically.
- Continue the download process for the next device.

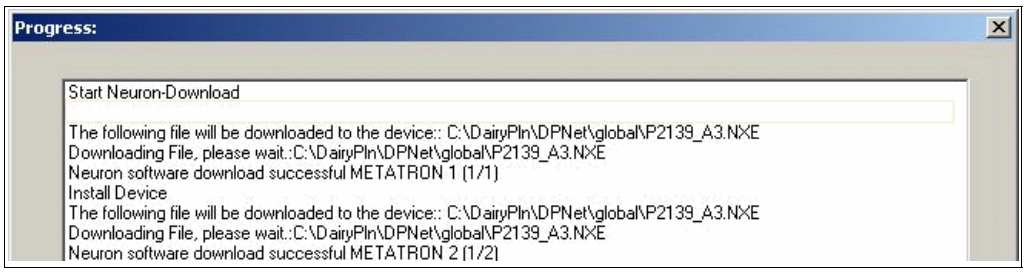
11.3.3 Group download

Note!
Requirements for a group download:
- The devices that are to receive the new software are already installed.
- All of the devices are of the same type.

A group download enables software to be downloaded to several devices at the same time.

Attention!
Close all other programs before the download.
The power supply and data communication must not be interrupted during the process!

Once the group download had been completed, the whole process can be checked in a progress window.

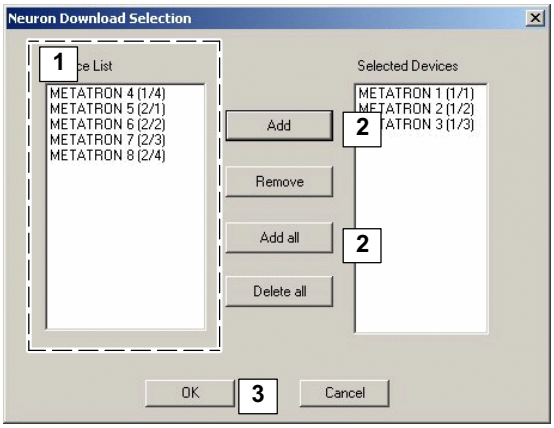

Progress:
Start Neuron-Download
The following file will be downloaded to the device:: C:\DairyPln\DPNet\global\P2139_A3.NXE
Downloading File, please wait.:C:\DairyPln\DPNet\global\P2139_A3.NXE
Neuron software download successful METATRON 1 (1/1)
Install Device
The following file will be downloaded to the device:: C:\DairyPln\DPNet\global\P2139_A3.NXE
Downloading File, please wait.:C:\DairyPln\DPNet\global\P2139_A3.NXE
Neuron software download successful METATRON 2 (1/2)

Group download, Neuron processor

Note!
A group download is not possible for the bootloader software.

To transfer neuron software to several devices:

- Select the type of device from the ”tree”.
- Start the group download from the ”Device Software->Group Download->Neuron Processor” menu.
- Area (1) lists all devices in the installation which correspond to the device type selected.
- Copy all of the devices to be updated into the selection list with the copy buttons (2).
- Confirm with OK (3).
  The neuron software is automatically transferred to all of the devices in the selection list, one after the other.



Note!
The transfer to the individual devices always takes place one after the other (sequentially) and not at the same time as in a group download for the host/application software.

Group download, Host processor

Group download enables the host software to be transferred to all of the devices in a milking parlour row at the same time.

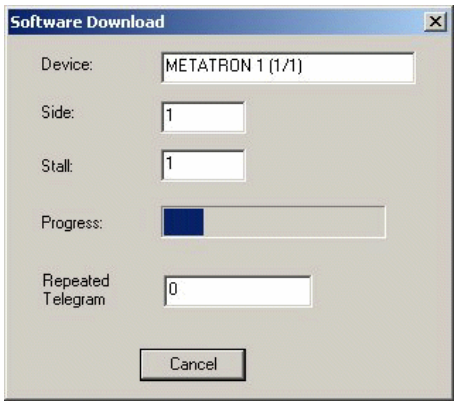
Note!
A group download only saves time if there are at least 6-8 devices to be updated.

Note!

- A group download is not possible with the Service Pin.
- Only those devices which require the same software version can be updated at the same time.
- Devices that are not compatible with the software determined (the guide for this is the device selected) are automatically removed from the download list and must be transmitted individually afterwards.
- At least Metatron Host Version 1.20 is required for the group download.
  If this has not yet been installed, all of the devices to be updated must first be supplied individually with new software.
  There is a special host version 1.19 for this that is only suitable for preparing a group download. This version can be installed in a much shorter time.
  Version 1.19 is not suitable for milking!

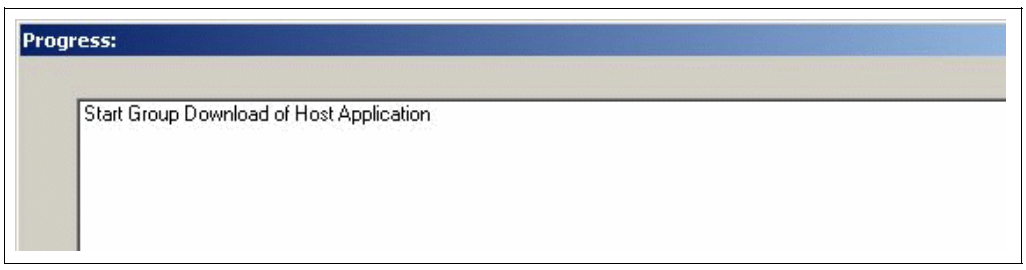
Start group download for the host application for DPNetA devices:

- Select a device for the relevant row from the ”tree”.
- Select ”Device Software -> Group Download-> Host/Application Software”.
- The current host software is transferred to all devices in corresponding series.



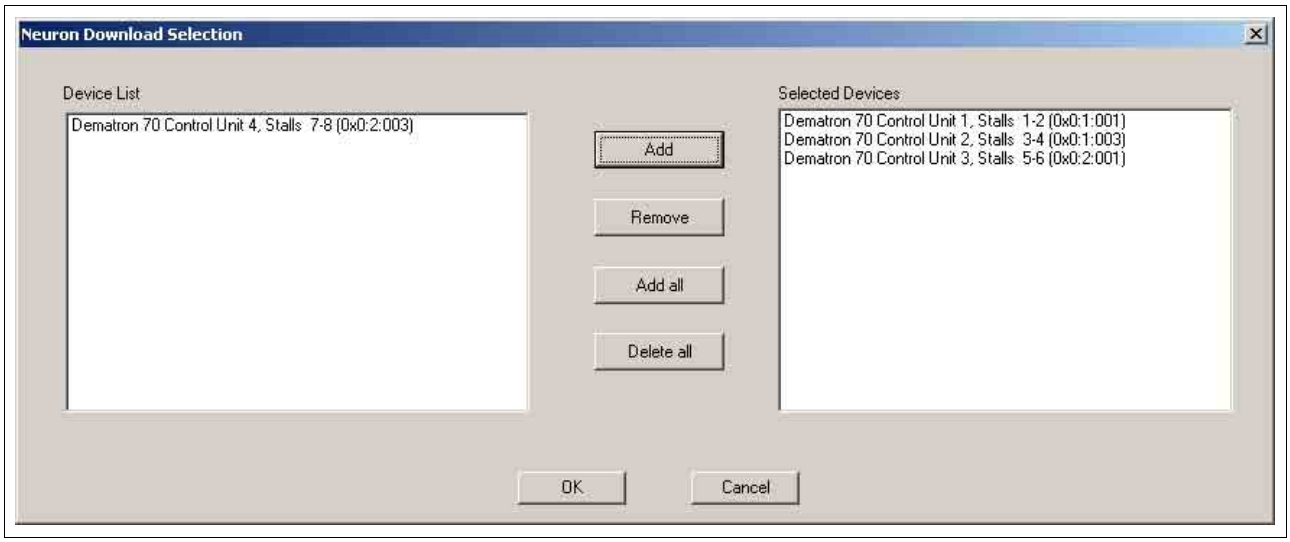
Note!
Devices with host software which could not be updated in the group download will be automatically updated individually at the end of the group host download.

When the group download has ended, all of the updated values will be listed.



Starting group download for the application software for a DPNetB device

- Select a device of the type required.
  - The device selected determines which software is to be transferred to the device.
- Select Device Software ->Group Download ->Host/Application Software.
- The following dialogue box opens:



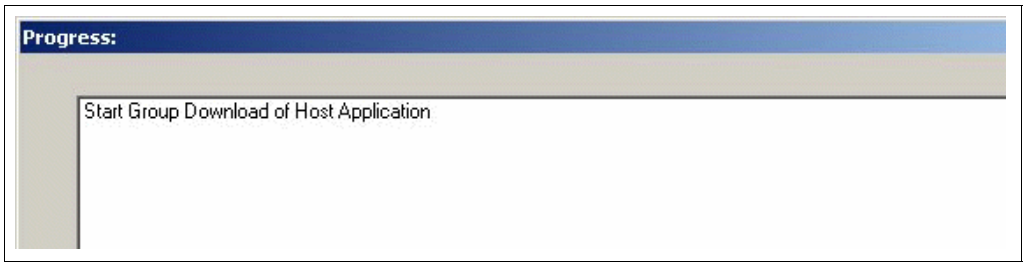
On the left of this dialogue box is a list of the available devices (as with the group download for neuron software).

When individual devices are marked, clicking on the ”Add” button moves them to the list of devices to be updated (right-hand list).

If all of the devices are to be updated, this can be achieved with the ”Add all” button.

- The ”OK” button starts the download process.

When the group download has ended, all of the updated values will be listed.



11.3.4 Scan the network

When scanning the network, DPNetInstall searches for current devices (installed in the milking parlour and connected to the interface).

While doing so, the addressing and configuration of all devices found are checked.

If devices are discovered with addresses that are outside of the permitted range or which already exist, this is indicated by the background colour for the device.

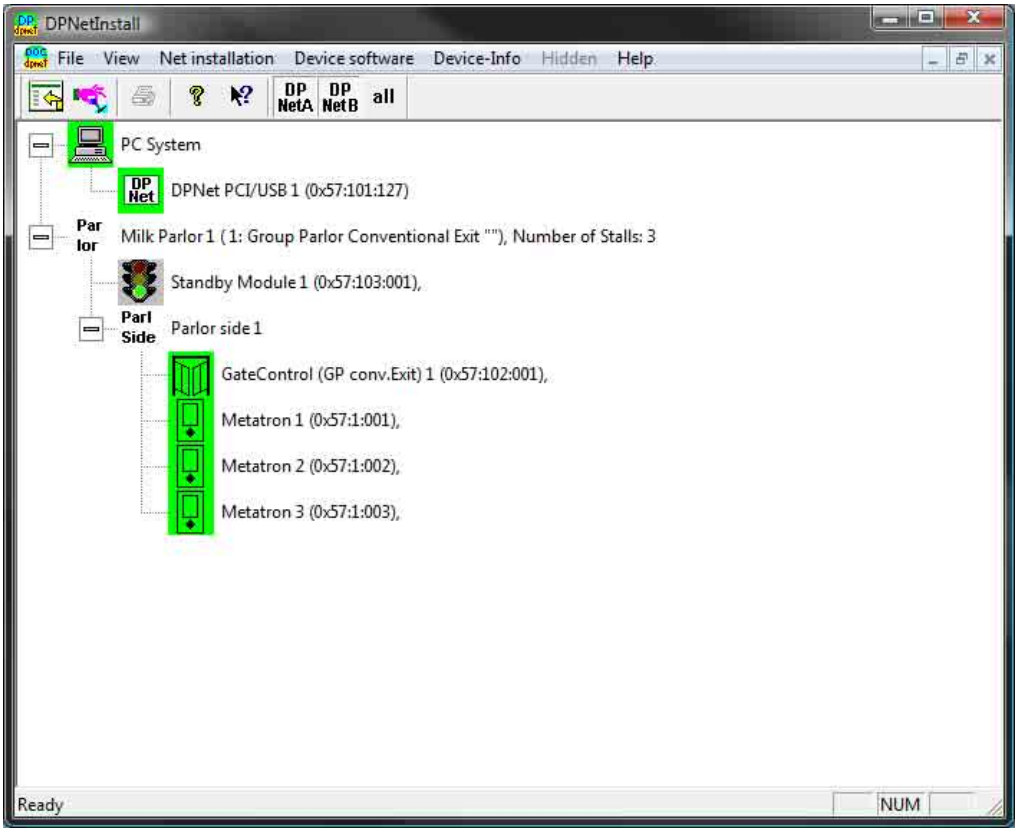
An error message may also be given.

The software version of the devices is also checked.

If there is a more recent version of the software this will be shown in the text of the installation tree.

More information is given in the section on ”Program Symbols” in the ”DPNetInstall” section.

If the milking parlour has been installed correctly, the following image will be shown:



Start scan

- Under ”Network installation”, select the option ”Scan network”.

11.4 Equipment information

Here, you can call up information on a device selected or call up actions.

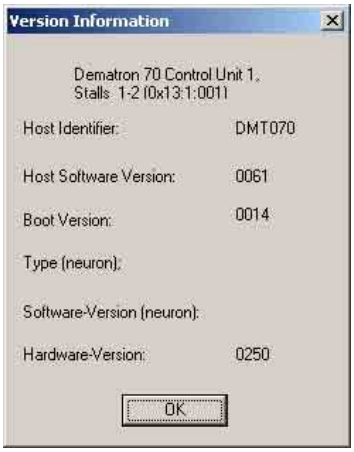
There are two ways to select the device:

- By clicking on the Service Pin
- By making a selection in the tree

Status query

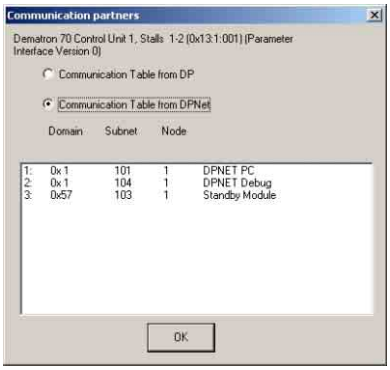
Display of status information on the Neuron processor (important for fault diagnosis).

- ”Node state” value must be the ”Configured/Online” value
  If the entry does not match, a new Neuron download must be carried out.
- If any problems occur, note the value of ”ResetCause” and ”NodeState” and give to the engineer if asked.



Communication table query

Display of the devices with which the device selected can communicate.

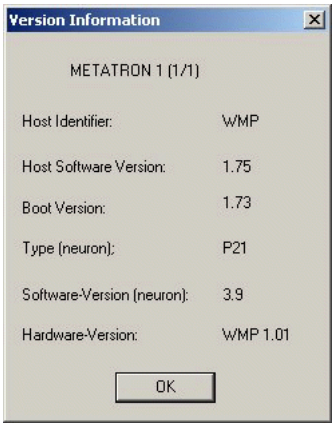

Communication partners
Dematron 70 Control Unit 1, Stalls 1-2 (0x13:1:001) (Parameter Interface Version 0)
Communication Table from DP
Communication Table from DPNet
Domain Subnet Node
1: 0x1 101 1 DPNET PC
2: 0x1 104 1 DPNET Debug
3: 0x57 103 1 Standby Module
OK

Version query

Display of version information on the device (including the current version of software and hardware).

”Host Identifier”, ”Software Version Host” and ”Boot Version” only have entries if the devices have host/application software (see Metatron example).

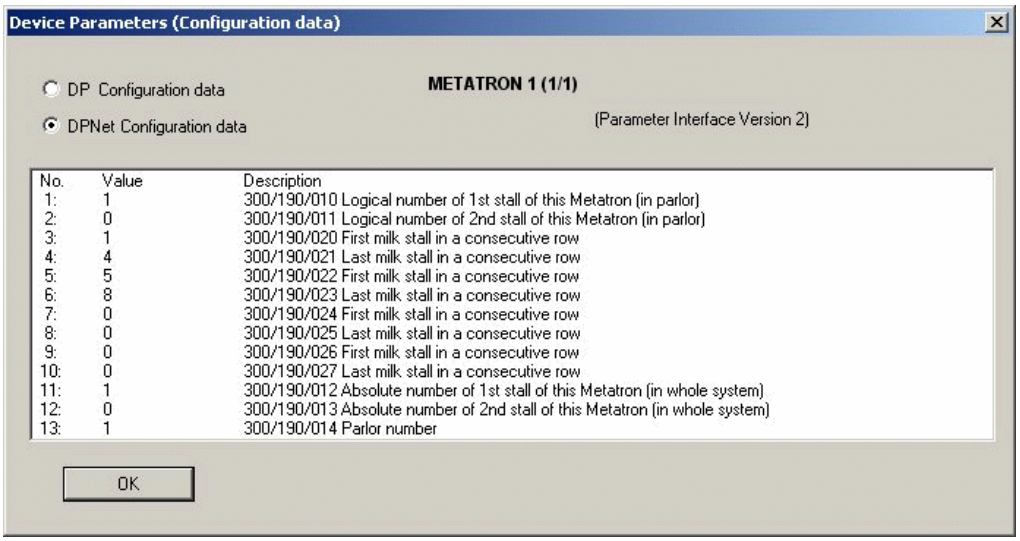
If there are any problems, note the details for the engineer.



Configuration data query

The configuration data asked for can be compared with those in DairyPlan.

The interactive window displays the configuration data on the device selected


Device Parameters (Configuration data)
DP Configuration data
DPNet Configuration data
METATRON 1 (1/1)
(Parameter Interface Version 2)
No. Value Description
1: 1 300/190/010 Logical number of 1st stall of this Metatron (in parlor)
2: 0 300/190/011 Logical number of 2nd stall of this Metatron (in parlor)
3: 1 300/190/020 First milk stall in a consecutive row
4: 4 300/190/021 Last milk stall in a consecutive row
5: 5 300/190/022 First milk stall in a consecutive row
6: 8 300/190/023 Last milk stall in a consecutive row
7: 0 300/190/024 First milk stall in a consecutive row
8: 0 300/190/025 Last milk stall in a consecutive row
9: 0 300/190/026 First milk stall in a consecutive row
10: 0 300/190/027 Last milk stall in a consecutive row
11: 1 300/190/012 Absolute number of 1st stall of this Metatron (in whole system)
12: 0 300/190/013 Absolute number of 2nd stall of this Metatron (in whole system)
13: 1 300/190/014 Parlor number
OK

Signals

The signal command for the selected device is triggered by means of ”signals”. This command is carried out differently by the various devices.

Device		Signal command
DeMax/DemaTron		LEDs will flash 3 times
Metatron P21/S21		LEDs will flash 3 times
Gate control		Gate rattles (only when vacuum is connected)
Box control unit		Gate rattles (only when vacuum is connected)
Standby module		No action
Control panel	OCR	”Winking” on the display
Feed module	FTM	Gives out a portion of feed.

Setting of configuration parameters

Transfer of configuration data to the device selected without having to carry out installation.

This action can only be used for installed devices.

Transfer communication partner

Transfer entries in the communication table to the selected device without having to perform an installation.
This action can only be used for installed devices.

12 Installation of DPCalfFeeder

The DPCalfFeeder program connects DairyPlan to a calf feeder via an FT GateWay.

The DairyPlan module HM-J is required for this.

A CD supplied with the FT GateWay has the additional program modules required.
The following programs should be installed from this CD, in the order given:

1. FT COM Server
2. FT Terminal Program
3. Licence file for FT COM Server

- To do this, start the file com_setup.exe from the CD. This installs the COM Server and the Terminal Program.

Once the installation has been successfully completed, the program will then be in the folder specified during the installation.

- Copy the licence file named dspkm.liz into this folder from the main directory on the CD.

Then continue with the installation as described in the manual supplied with the FT GateWay.

Note!
To configure the FT COM Server, start DPCalfFeeder and in the Links menu, select ”Feeder Connection...”.

Then follow the instructions in the manual supplied with the calf feeder, section 4.1.1.2, paragraph 3.

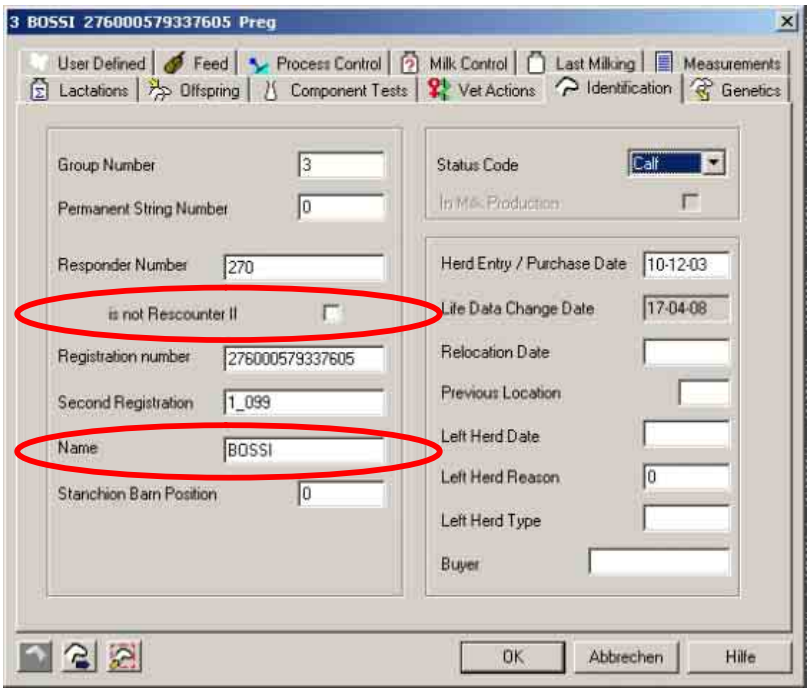
When all of the entries have been made, the data for the calf feeder will be displayed in DPCalfFeeder.

Match animal data in DairyPlan and in the feeder (when commissioning)

If a feeder that already has animals logged in is to be connected to the DairyPlan programs for the first time, the animal IDs in the feeder have to be assigned to the animal IDs in DP, once manually.

- Start DPSingle and, in the ”Responder Number” field, enter the transmitter number from the feeder.
  In the ”Special Animal ID” field, give the machine number of the feeder and the animal ID in the feeder, as shown in the diagram below.

  Machine No. Feeder_Animal ID Feeder



These entries are made automatically for animals that, once the connection has been set up, are logged onto the feeder via the log-on dialogue box in DPCalfFeeder.

13 Operation

For detailed information on operating Dairy Management System 21, see the following manual:
Effective herd management with Dairy Management System 21 (Version 5.2)
7160-90 . . -530

14 DairyPlan programs

This section describes the areas in which some of the DairyPlan programs can be used, and how to use them.

14.1 General remarks

Help

In DairyPlan press ”F1” to call up the Online Help.
It appears in the context of what is in the current window.

Enter Date / Time

- current date/time: enter ”-” or ”+” and leave the field.
- Entering retro-active date: enter ”-3” (date three days previously).
- Of course the date can also be written out.
- Other possibilities:
  - Enter day: current month/year is added automatically,
  - Enter day and month: current year is added automatically.

Data input

To get into the field to be edited, press the Tab key (Backspace with ”SHIFT”-”TAB”),

Pressing the ”Enter” key usually saves the data entered and completes the function.

Attention!
The data stored in DairyPlan are an extremely important and practically irreplaceable asset!
Therefore, back up the data every day on an external data carrier (e.g. writable CD or USB stick).

14.2 DPBackup

The program ”DPBackup” is available for backing up data or reading an existing backup.

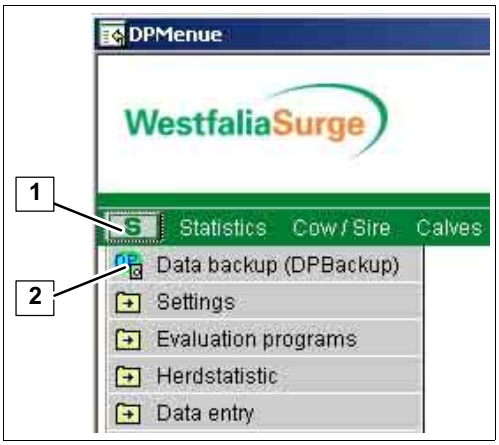
Note!

Save data regularly and keep in a safe place!

For further information on the subject, see the manual 7160-90 . . -530

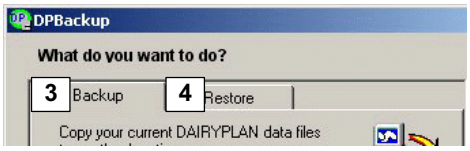
Calling up DPBackup

- Press button (1)
- Start ”Data backup (DPBackup)” (2).



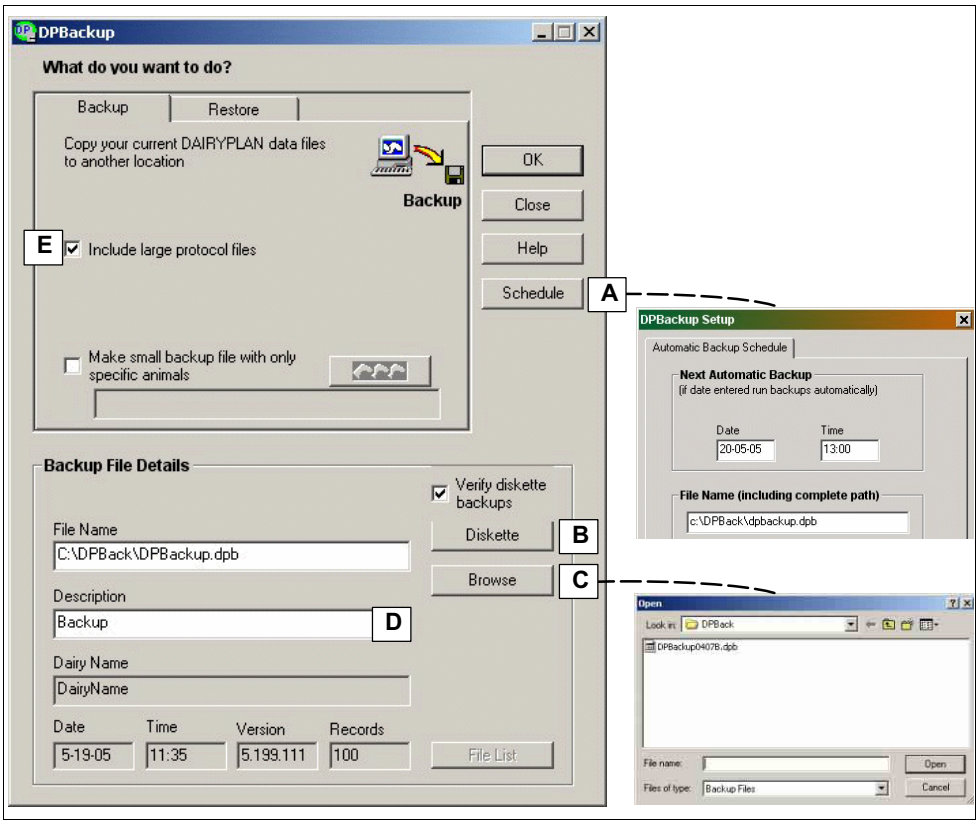
- Select next step.

3	Protect data
4	Retrieving data



Protect data

- Call up DPBackup.
- Select the destination for the back-up.
  Data can be backed up on diskette and also on other data media.
  For more information on this subject, please refer to the ”Online Help” (F1).



A	Set-up for automatic data back-up
B	Floppy disk drive. File name ”DPBackup.dpb” is given as a default. This can be changed if necessary
C	The Windows standard window for saving files is opened. Here any drive/directory on the computer can be specified for data back-up.
D	You can enter a comment on the back-up here. If the back-up data is to be retrieved, the relevant comment appears in this line.
E	Option for backing up all data (including special log files). Important for problem analyses by the service engineer.

- Confirm entries with ”OK”
- The data has been backed up.

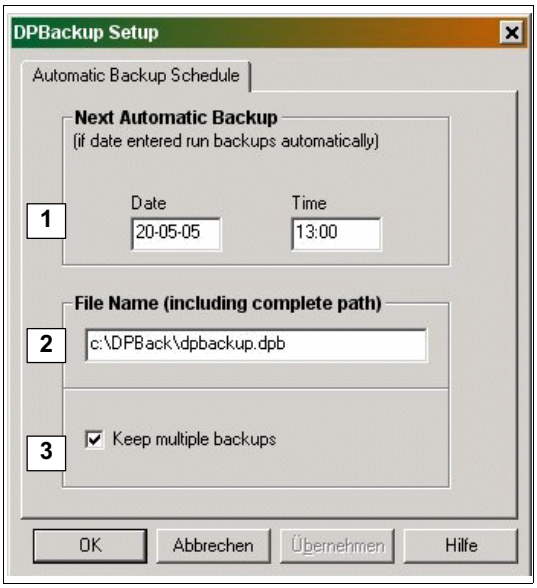
Automatic data back-up

Note!

Unlike a manual back-up, to carry out an automatic back-up the ”DPProcessControl” has to be opened in the background.

It is possible to have data backed up on a daily basis.

Click on ”Setup” to open the window opposite.



1	Once a backup has been performed on the specified date, the date will be moved forward by one day.
2	Under file name, enter the desired name and the path and confirm by clicking on ”OK”. No warning will be given if the directory selected already has a previous backup with the same name, and the file will be overwritten without confirmation.
3	Multiple backups. Backups are saved at regular intervals under different names.

Retrieving data

If necessary (e.g. if the PC is faulty following lightning) it may be necessary to retrieve old backed-up data.

Note!

With the exception of DPBackup, all DairyPlan programs that are currently open must be closed. This also includes the main menu and process control!
the latter can only be closed via ”File close”.

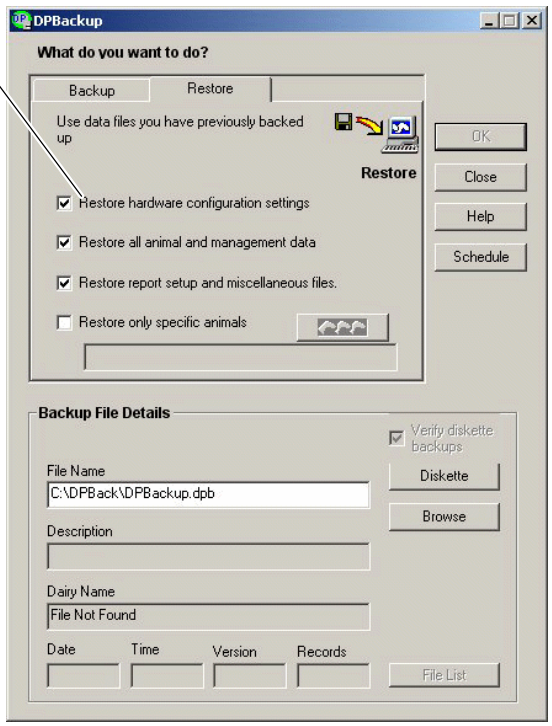
You can specify the extent of the retrieved files.

Clicking on ”List” will display the corresponding files which are marked with a blue tick.

The files are selected in the same way as when data is backed up.

Once the old data backup has been loaded, the PC should then be shut down and restarted.

Make sure that the process control starts up at the same time.



Note!

The data in a backup are always ”historical” and only as current as the date of the backup.

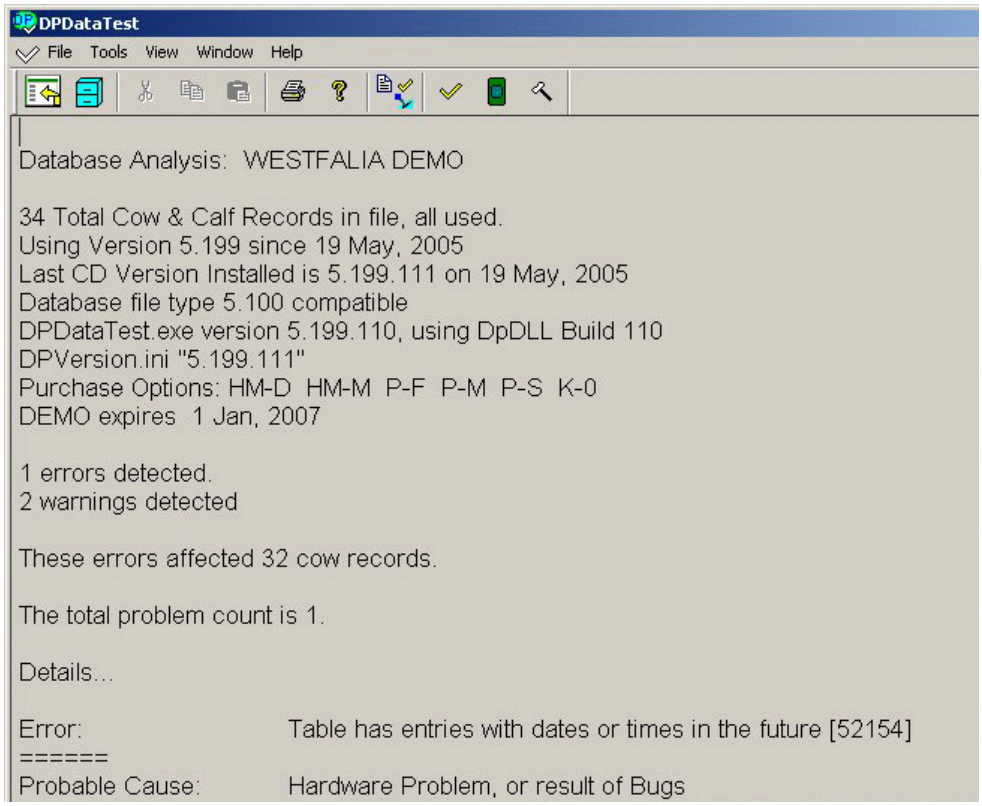
14.3 DPDataTest - Test Program

What DPDataTest Does

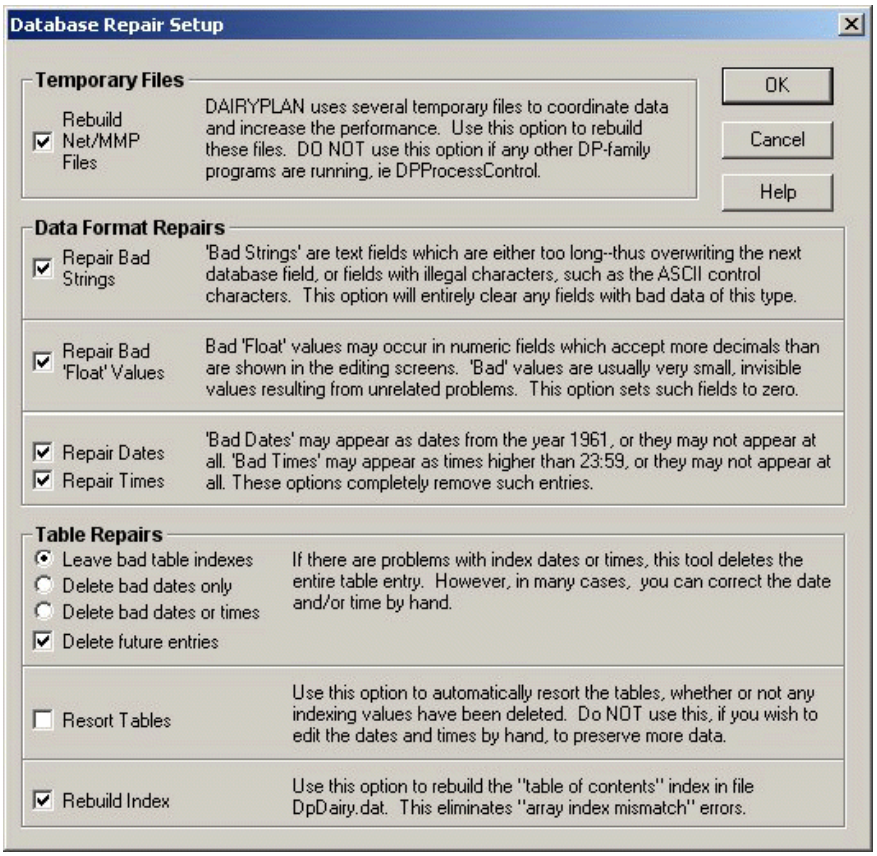
”DPDataTest” is a test and repair program for DairyPlan data records.
The program analyzes the data record for errors and warnings in each individual animal record. All messages can be printed out.

Carrying out DPDataTest

- Start program ”S-> System Programs-> Data Base Test (DPDataTest)”
- In the ”File” call up ”Test Data Base” in order to activate the data test (alternatively click on the button shown).


DPDataTest
File Tools View Window Help
Database Analysis: WESTFALIA DEMO
34 Total Cow & Calf Records in file, all used.
Using Version 5.199 since 19 May, 2005
Last CD Version Installed is 5.199.111 on 19 May, 2005
Database file type 5.100 compatible
DPDataTest.exe version 5.199.110, using DpDLL Build 110
DPVersion.ini "5.199.111"
Purchase Options: HM-D HM-M P-F P-M P-S K-0
DEMO expires 1 Jan, 2007
1 errors detected.
2 warnings detected
These errors affected 32 cow records.
The total problem count is 1.
Details...
Error: Table has entries with dates or times in the future [52154]
======
Probable Cause: Hardware Problem, or result of Bugs

- The customer data record is opened and analyzed for errors/warnings.
  If the program finds any errors or warnings, the menu point ”Repair file-data record” can be called (alternatively, click on the button shown).
  The screen will also show whether it has been possible to remove the errors successfully.


Database Repair Setup
Temporary Files
Rebuild Net/MMP Files
DAIRYPLAN uses several temporary files to coordinate data and increase the performance. Use this option to rebuild these files. DO NOT use this option if any other DP-family programs are running, ie DPProcessControl.
OK
Cancel
Help
Data Format Repairs
Repair Bad Strings
'Bad Strings' are text fields which are either too long--thus overwriting the next database field, or fields with illegal characters, such as the ASCII control characters. This option will entirely clear any fields with bad data of this type.
Repair Bad 'Float' Values
Bad 'Float' values may occur in numeric fields which accept more decimals than are shown in the editing screens. 'Bad' values are usually very small, invisible values resulting from unrelated problems. This option sets such fields to zero.
Repair Dates
Repair Times
'Bad Dates' may appear as dates from the year 1961, or they may not appear at all. 'Bad Times' may appear as times higher than 23:59, or they may not appear at all. These options completely remove such entries.
Table Repairs
Leave bad table indexes
Delete bad dates only
Delete bad dates or times
Delete future entries
If there are problems with index dates or times, this tool deletes the entire table entry. However, in many cases, you can correct the date and/or time by hand.
Resort Tables
Use this option to automatically resort the tables, whether or not any indexing values have been deleted. Do NOT use this, if you wish to edit the dates and times by hand, to preserve more data.
Rebuild Index
Use this option to rebuild the "table of contents" index in file DpDairy.dat. This eliminates "array index mismatch" errors.

Notes on the ”File-> Repair data record” menu
The dialog box ”DataBase Repair Set-up” selects which errors are to be corrected. In the standard set-up all possibilities such as string errors, data type errors, data and time data are selected.

Note!

To correct an error in the table, all three options ”Delete bad index, Delete bad date, Delete bad date/time” should be selected one after the other and the corresponding repair tool called up.

Keep repeating the ”Check and Repair Database” procedure until no more errors are displayed.

Cause of Error when Starting DPDataTest:

- less than 200 megabytes of space on the hard disk
- temporarily remove all programs from the ”AutoStart” group
- please note the exact error message
- delete the DairyPlan file ”DPNet.DAT”

14.4 DPDataConfig

When to use ”DPDataConfig”

- To maintain the DairyPlan data records
- When the size of the data bank tables for an animal in DairyPlan is to be changed.
- To optimize data access (defragmentation)
- If various tables (e.g. ”Measurements” or ”Weekly Resources”) are to be extended for certain applications.

Function

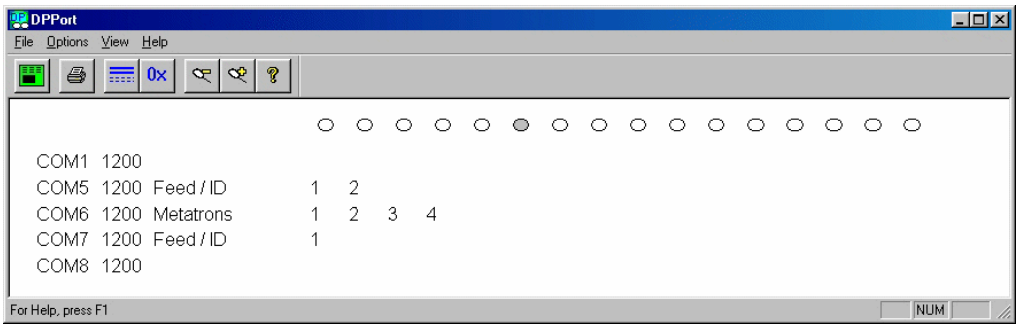
The program copies all data from DairyPlan into new files on the hard disk. The new file is sorted according to animal ID; all deletions and file errors are eliminated.

”DPDataConfig” checks the settings made for the hardware and the various graphs if entries have also been made in different tables (e.g. ”Measurements” or ”Weekly average”). The tables are expanded to take additional data.
Most data record settings are made automatically.

Executing the Program

- End all DairyPlan programs (see also ”Appendix”).
- Start ”DPDataConfig” from the Windows task bar via the ”Start” button, then ”Programs”, ”DairyPlan”.
- End the program with the OK button.

14.5 DPPort - Help Program



When to use DPPort

- when the electrical wiring between the interface card and peripheral has to be checked.
- to check the addresses of the interface cards or existing COM ports.
- when a check has to be made to ensure that the peripheral units are responding correctly
- when it is necessary to check whether the peripherals are connected to the right channel (1A, 2A, etc.) / COM Port.

Note!

DPPort works independently of any DairyPlan settings.

DPPort cannot be used for DMS 21 GateWay ports.

Function

Shows a test of the interface connection.
All channels are tested simultaneously. The cable connections can be put together and taken apart while the program is running so that the results can be seen.

Executing the Program

- In Windows Explorer, start the program ”DPPort” by double clicking on it.
- When the relevant icon is clicked on in DPSetup, the screen shows information on the connection (COM port, channel), speed, device type and number.
  If various peripherals are connected the number of devices will be shown.
  Example:
  - Metatron COM 6 with 4 connected devices
  - Feed box COM 5 with 2 feed stations.
- If the screen shows ”PORT NOT FOUND” and the interface card actually has been installed, then check all of the plug-in connections or replace the card.
- Insert a test plug (7162-9047-080) in each available outlet in order to test the channels on the interface card.
  If the ”Test Plug” is not displayed, check the plug connections in the card and/or replace the card.

> **Note!**
> Internal modems may sometimes be shown as a ”Testplug”.

- Connect the cable to the peripheral’s power supply. Each address from 0 to 15 is tested separately. Make sure that the first feed station (or the first milk meter) has the address 0. If some devices answer with the wrong address / answer on the wrong COM port, check the plug connections and feed stations.

> For further information on the subject, see the manual 7161-90 . . -530

> **Note!**
>
> Device 1 has the address 0, device 2 has the address 1, etc.
> Device numbers: 1 - 16, Address numbers: 0 - 15

- If none of the connected units replies then disconnect all units (except the first) from the power supply. Check all wiring and fuses carefully until the first units works correctly.
- Once the first unit is working, wire up the additional units one by one. A single faulty unit can affect the entire system of communication of the entire channel. Replace any defective units.

14.6 DPAlarm

General remarks

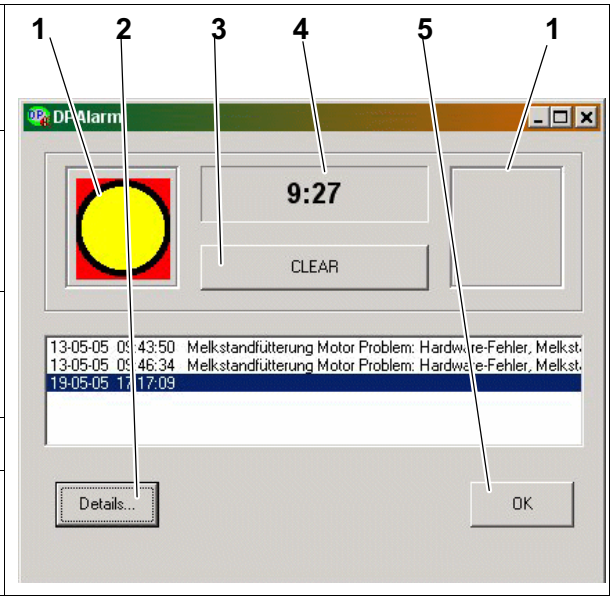
Different programs send an alarm signal to DPAlarm as the central alarm administration if a problem occurs (e.g. problem with a feed box). The program manages the alarms raised, shows a current alarm in a clearly visible window and may also give an acoustic alarm. This will need a sound card with associated loudspeaker boxes.
It is also possible to call up other programs via an alarm (e.g. pager - radio call - program)

Function

If a message relating to a malfunction has been sent to ”DPAlarm”, the pre-alarm time is first to be activated. This can be set by the individual user (see ”Set-up”).
In the case of a one-off short malfunction - e.g. brief cut in power supply to feeder box), an unnecessary alarm can be avoided in this way. Only if the problem is still present when the pre-alarm time expires will the actual alarm be triggered.

If an alarm is sent several times without being acknowledged in the interim, it is only displayed once.

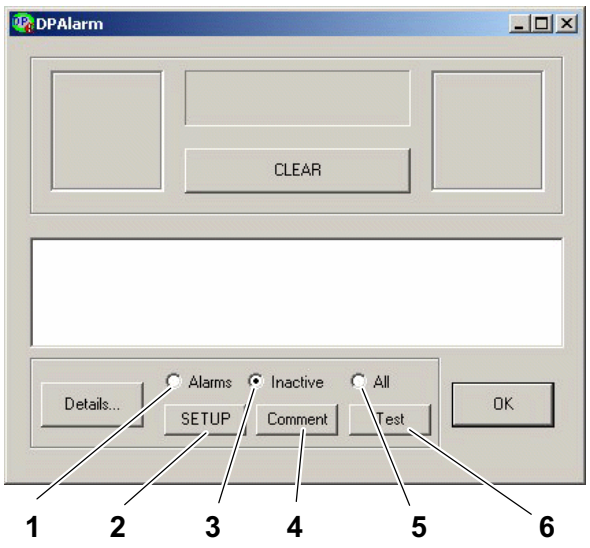
1	Optical signal: Flashes when there is an alarm signal
2	Details: Click here to activate the set-up functions of the alarm program.
3	Acknowledge Clicking here clears an alarm.
4	Pre-alarm time
5	OK: Clicking on ”OK” closes the program.



Note!

If the program is terminated without acknowledging a current alarm the corresponding alarm signal will still be given.

DPAlarm ”DETAILS”

1	Alarms: Only the current alarm will be indicated	
2	Setting: Call up set-up dialog	
3	Inactive Alarms already confirmed are indicated. Double-clicking on the relevant alarm gives additional information on the alarm.	
4	Comment: Any comments can be added	
5	All: All alarms and actions (e.g. last update) are shown	
6	Test: Call up flashing and alarm display on the computer	

Settings

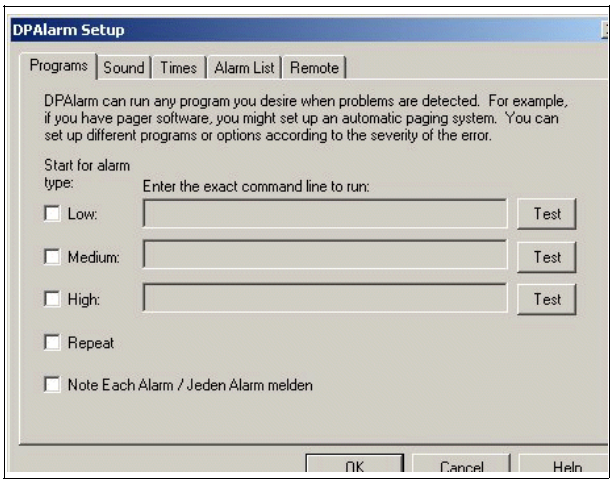
”Programs”

Alarms are reported to the DP alarm program in three different levels, the priority of which is determined by the sending program and cannot be influenced.

Clicking on the appropriate checkbox calls up the program and the name of the program can then be entered.

If there are several current alarms waiting, the one with the highest priority will be sent first.

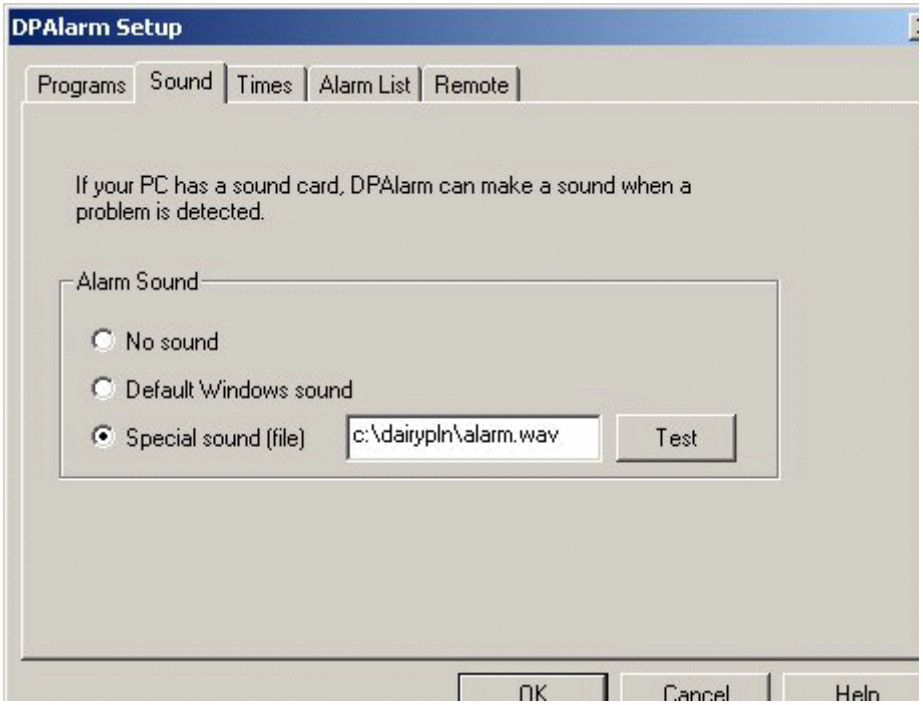
If ”Repeat” is activated the pre-alarm time will start to run again and again and each time the time expires the programs entered will be called up.


DPAlarm Setup
Programs
Sound
Times
Alarm List
Remote
DPAlarm can run any program you desire when problems are detected. For example, if you have pager software, you might set up an automatic paging system. You can set up different programs or options according to the severity of the error.
Start for alarm type:
Enter the exact command line to run:
Low:
Medium:
High:
Test
Repeat
Note Each Alarm / Jeden Alarm melden
OK
Cancel
Help

”Sound”

If the ”Special” function is selected, any *.wav (Windows–Sound file) can be activated when there is an alarm.

This requires the entering of the corresponding file name with the appropriate path specification.



”Time”

In this menu it is possible

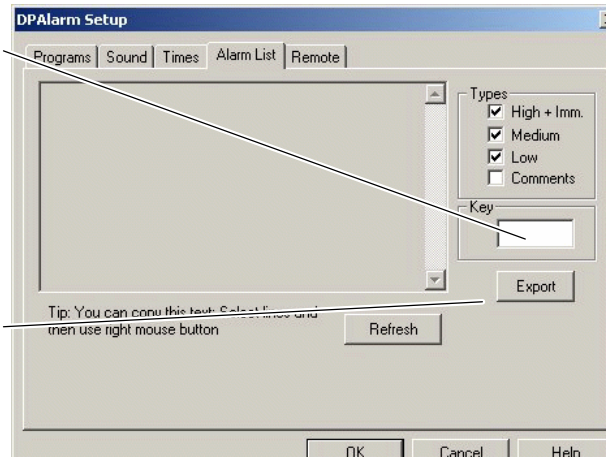
- to enter the pre-alarm time.
- Number of days after which old alarms can be cancelled.

”Alarm List”

Using this function it is possible to show, copy or export into a file all saved alarms in accordance with certain selection criteria

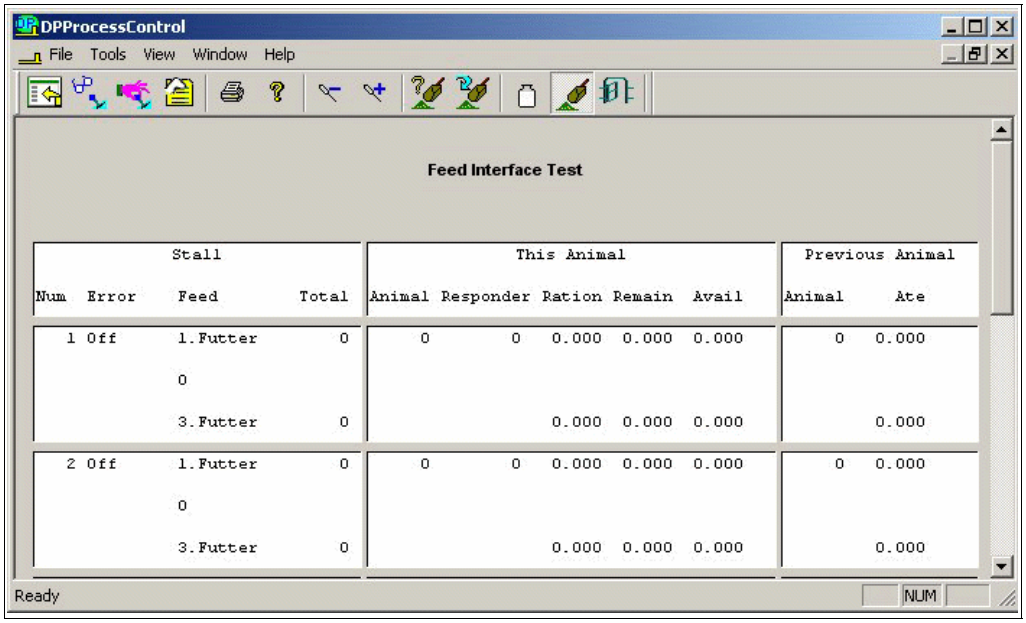
If only certain types of alarm are to be displayed, enter the type of alarm here (e.g. ”FeedOff”).
Finally, click on ”Update”.

Export: With this function the alarms can be copied into a text file.



14.7 DPProcessControl

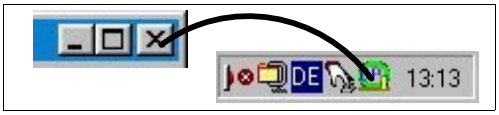
The ”DPProcessControl” program controls communication between the peripherals connected and DairyPlan.


DPProcessControl
File Tools View Window Help
Feed Interface Test
Stall
This Animal
Previous Animal
Num Error Feed Total Animal Responder Ration Remain Avail Animal Ate
1 Off 1.Futter 0 0 0 0.000 0.000 0.000 0 0.000
0
3.Futter 0 0.000 0.000 0.000 0.000
2 Off 1.Futter 0 0 0 0.000 0.000 0.000 0 0.000
0
3.Futter 0 0.000 0.000 0.000 0.000
Ready
NUM

Attention!
Process control stops immediately if the ”DPProcessControl” program is stopped. Then the animals will not receive any feed and the milk metering and identification systems will cease to work!

DPProcessControl can only be stopped with ”File-> Exit”.

Pressing ”X” minimizes the program window and places it in the task bar.



15 Operating faults

If necessary, please contact your nearest authorised technical dealer.

15.1 Special personnel qualification required for troubleshooting

Troubleshooting may only be performed by specially qualified personnel in accordance with the safety instructions.

Also see the section on ”Personnel qualification”.

15.2 Safety instructions for troubleshooting

To prevent damage to property and/or life-threatening injury to personnel always observe the following:

Also read the chapter on ”Safety”.

Special dangers involved in troubleshooting:

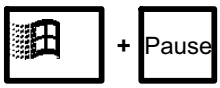
- Electrostatic processes may damage electronic components.

Attention!
Only touch the edge of the printed circuit board and avoid static caused for example by clothing.

15.3 Computer System - Hardware

Windows provides facilities for checking the computer system.

Information on the hardware can be called up in Device Manager.

Note!
The system properties (Device Manager) can also be called up with this key combination. 

Malfunction	Cause	Remedy
Total failure	Power supply problem	Check all socket outlets and all cable connections
	Wrong supply voltage being used	Voltage setting
	Lightning strike	Check the interface card
	Hardware problem	Service the unit
Empty screen even though the system is working (feed or milk OK or printer reports)	No power supply to monitor	Check plug
	Not enough brightness or contrast	Change control settings
	Loose monitor cable	Secure cable
	Defect on the monitor	Replace monitor.
	Defective video adapter card in PC	Change adapter card (see PC Operating Instructions)
	Faulty PC motherboard	Have the PC serviced
Empty screen - system not operating, with exception of light on keyboard and/or hard disk noises	A faulty adapter card can block all PC operations	Check the following: remove all additional cards - especially the interface cards, modems and serial adapter cards. Replace any faulty cards.
	Screen possibly faulty or the problem (especially after power failure)	Check monitor When the unit is switched on the PC would have to display the memory test otherwise it is a major hardware problem
	Defective PC motherboard or other PC fault	Service the unit
The computer does not start DairyPlan	Floppy disk sticking in drive	Remove floppy disk and start again from the hard disk
	DairyPlan has not been set up for automatic start (another program always appears)	Use the program ”CDAutoPlay” on the DairyPlan CD to set up ”Automatic Start”
	Windows 98 start files have been deleted from the hard disk (shown by ”Command not found” or ”Non-System Disk” or another system error message)	Call up Windows installation program from the CD (see Windows manual), then the program ”CDAutoPlay”.
	Interface card faulty or not installed correctly	Replace or reinstall interface card
	Hard disk fault	Switch off PC and allow to cool. Try again a few times. If it works then immediately make a backup on a separate disk! Start hard disk repair program (e.g. ScanDisk). If necessary format the hard disk and reinstall the whole PC system (see PC manual for description). Preferably consult a PC specialist.

15.4 Computer system - DairyPlan software

Malfunction	Cause	Remedy
Animals are not appearing on the right lists	Poorly designed report	Set-up in list design (DPList) in order to see the animals included by DairyPlan.
	Animal data not entered	Select a missing animal. Call up DPSingle to check the data entry. Check all programmed data as ”List limit” and verify the ”Status code”.
	Unsuitable ”Follow-up vet actions”	A lot of reports require a ”future vet action” for the animals to be listed correctly.
Reports not printed automatically	Automatic functions not set	Set automatic functions
	Report has no animals	The report must have at least one animal within the limit values. Try to start the list manually and change the ”Report limits”.
Milking animals are being listed as ”missing”	Animal not identified	No action required. DairyPlan will estimate the data required.
	Wrong setting in ”automatic time event”.	Correct settings
	Too short a time has been set for the time before next ”missing animals” check.	Correct the time between the first and last milking of animals within one milking session.
Animals are not being milked but are not being identified as ”missing”	Another animal has been incorrectly identified.	Delete the incorrect animal data
	Wrong setting in ”automatic functions”	Set the automatic functions correctly
	Too much time has been set as the time before next ”missing animals” check	Correct the time between the first and last milking of animals within one milking session.
	Animal has the wrong status code	”Dry”, ”prepared” or is not being checked. Enter correct status.
	Animal has the wrong lactation number	Enter the right lactation number for the animal.
	The group of animals has been set to the wrong number of milking operations.	Change the setting for the animal in ”Group Setup, Group Parameters” or ”Group Numbers”.
Lactation totals are not correct	System still not working long enough.	A full lactation is needed to obtain a proper production data record. Estimations can be made by (a) entering the current estimated values from the control association (computer centre, etc.) or (b) starting ”estimation of the last lactation totals” for a rough estimate of the last production.
	””Estimation of lactation totals ” has been started.	The last production will be estimated roughly based on the actual daily quantity of milk. It should not be used apart from shortly after the system starts. If it has been used inadvertently, then current data may be confused with the estimated values. For this reason, enter numbers from old reports.
The milk yield of missing animals is not being estimated correctly.	The animal has no milk yield during lactation.	Animals are not identified as missing if they do not have a milk yield from Metatron at least once a month.
	The animal’s group has been set to the wrong ”Number of milking operations”.	Change group set-up or put the animal in another group.

15.5 Feeding

Malfunction	Cause	Remedy
”Off” or repeated error messages on the ”feed system interface” test screen.	Equipment fault. Mains voltage or other electrical faults	Check transceiver
Feed monitoring says that animals are feeding although actually they are not feeding	Feed supply faulty or empty	Fill the silo
	Mechanical or electrical problem with feed dispensing system	Compare feed dispensing service
	Wrong amount of feed programmed	See section headed ”Main menu”; ”Feeding”.
	Wrong feed calculation programmed	The automatic feed calculation facility should not be used until the system has been running on manual for a month.
	Weight of portion too small	DairyPlan is not giving out the specified feed quantities (see Section on ”Starting up DairyPlan”; ”Settings, Feeding”)
Feed monitoring (correct) shows a lot of animals not calling for food.	”Maximum feed quantity per Interval” is set too low	The animals are being prevented from receiving enough food whenever they visit.
	”Number of entitlement intervals” or ”Intervals per day have not been set correctly.	Start with the setting shown in the Section ”Start-up”; ”Set-up, feed ” according to the animals; admission to the feed stations.
	Insufficient access to the feed stations.	If easy access is provided, approximately 25 animals can feed at one station for 20 hours and more a day. Check how much it is being used with the feed lists or the report on visits to the feed box. (DPSetup, menu: ”System”, ”General Setup, Feeding”, record card: ”Other”) If the animals have only inadequate access you might try to modify or convert the feed station.

15.6 Printer

Malfunction	Cause	Remedy
Printer not working - no test printout	No voltage	Check the main fuse or switch.
	Melted fuse	Replace fuse
	Faulty mains cable	Replace mains cable
	Faulty printer	Have the printer serviced
Printer not printing - test printout OK	Printer not switched on (indicator lights not coming on)	Switch printer on
	Printer is ”OffLine”	Press the ”online” key
	Faulty cable, loose connections or connection made at the wrong point.	Repair the cable or connections (check on the correct connections in the PC manual).
	Wrong printer entered in the System Control.	
	PC faults	To check, test another printer and have the PC checked.
Printer not printing automatically	Printer switched off	Switch printer on.
	”Autom. functions” have not been programmed into DairyPlan.	See ”DP Start-up DP; Minimum entry ...”
Printout is weak and illegible	Printer cartridge is empty.	Replace printer cartridge.

15.7 DairyPlan Error Messages

”Internal error number X has occurred”

This message appears if an error has occurred within the DairyPlan 5 family. To rectify the error, certain actions have to be carried out. Note the action number in the corresponding line of your error number. The individual actions are described in the table ””What to do in the event of errors” at the end of this section.

The ”Source” and ”Description” columns are references points for GEA Farm Technologies GmbH technical personnel when troubleshooting.

No.	Action	Programs	Source	Description
0	**1**	D W	misc	error conditions not assigned to a number
1	**1**	D	new operator	out of memory (C++ new operator)
81	**9**	W	ADIS_QuickImport	Cannot index to record
82	**9**	W	ADIS_QuickImport	Cannot prepare to put data
83	**9**	W	ADIS_QuickImport	Cannot prepare subindex to put
84	**9**	W	ADIS_QuickImport	Cannot index to sub record
85	**9**	W	ADIS_QuickImport	Field does not allow import
86	**9**	W	ADIS_QuickImport	Error saving Field
87	**9**	W	ADIS_QuickImport	Error saving sub index record
88	**9**	W	ADIS_QuickImport	Error saving index record
102	**2**	D	loadadd:	incorrect offset address for pp
103*	**2**	D*	opencow:	can’t find cowdata file
104*	**2**	D*	opencow:	data version older than program
105*	**2**	D*	opencow:	data version newer than program
106	**2**	D	opencow:	wrong number of file divisions
107	**1**	D	checkleft:	insufficient memory
115*	**5**	D*	messup:	wrong number of message pointers
116	**1**	D	messfile:	insufficient memory
117	**1**	D	messload:	insufficient memory
121	**3**	D	loadary:	lastcow pointer out of range
131	**3**	D	cowadd:	record number greater than max
132	**4**	D	loadary:	out of memory
135	**4**	D	saveary:	incorrect count from sort
141	**4**	D	settdc:	incorrect memory pointer
142	**1**	D	gettdcin:	insufficient memory
201	**4**	D	closrep:	write report form w/ neg file
202*	**6**	D*	openrep:	incorrect report file size
203	**6**	D	closrep:	error writing report form file
204	**4**	D	closrep:	repfile value error
205	**4**	D	closrep:	error closing report form file
221*	**5**	D*	repask:	branching error
231	**4**	D	groupld:	sorted wrong number of cows
232	**4**	D	groupset:	missing zero in group rstr array
233	**1**	D	groupset:	insufficient memory
234	**4**	D	lhidset:	sorted wrong number of cows
235	**1**	D	lhidset:	insufficient memory
241	**4**	D	mcrgmem:	null cow structure
242	**4**	D	mcrgmem:	null cow pointer array
243	**4**	D	mcrgmem:	null sire structure / ptr array

No.	Action	Programs	Source	Description
244	**4**	D	mcrgmem:	null sorting array
245	**4**	D	mcrtmem:	memory reallocation error
246	**4**	D	mcremem:	memory reallocation error
247	**5**	D	mcrgmem:	non-null pointers
248	**5**	D	mcrgmem:	non-null pointers
249	**5**	D	mcrgmem:	non-null pointers
251	**4**	D	indivrep:	insufficient memory
252	**4**	D	mcrgpadj:	insufficient memory
253	**1**	D	mcreploadl:	insufficient memory
261	**4**	D	mcrsst:	insufficient memory
262	**4**	D	mcrsst:	insufficient memory
263	**5**	D	mcrsst:	null pointers
271	**4**	D	getmcrs:	insufficient memory
301*	**6**	D*	menurep:	report format file not found
302*	**5**	D*	repset:	incorrect number of pointers
303	**5**	D	spcptrs:	incorrect number of pointers
304	**5**	D	mcrepmak:	dfmode out of range
305	**4**	D	mcrepmak:	mcr not compiled
306	**5**	D	dpreport:	dfmode out of range
307*	**1**	D*	menurep:	out of memory
308*	**1**	D*	menuanal:	out of memory
309	**1**	D	dpimport:	out of memory
310	**5**	D	mlkcalc:	illegal estimates attempted
351*	**5**	D*	edtcal:	incorrect number of pointers
352*	**5**	D*	edtfed:	incorrect number of pointers
353	**5**	D	cowptrs:	incorrect number of pointers
354	**4**	D	edwfsav:	cow number already exists
355	**4**	D	edwfres:	cow number mismatch
356	**4**	D	dpf34:	rec34 undefined
370	**1**	D	edstuff:	insufficient memory
371	**4**	D	askstr:	field length <= 0
372	**4**	D	edstuff:	NULL pointer to data field
373	**4**	D	edstuff:	itm out of range
374	**4**	D	genpop:	attempt to restore before save
375	**4**	D	swpolice	ram security check failed
376	**4**	D	swpolice	heap security check failed
377	**4**	D W	TarSet	illegal time entry in table
381	**1**	D	fastfeed:	insufficient memory
382	**1**	D	feedtabl:	insufficient memory
383	**1**	D	edcfed:	insufficient memory
384	**1**	D	mbackup:	insufficient memory
385	**1**	D	fastmth:	insufficient memory
391	**4**	D	fcv_get_data	NULL structure pointer
392	**1**	D	fcv_get_fmem	insufficient memory
393	**6**	D	fcv_get_fmem	incorrect number of feeds
394	**1**	D	feedtable	insufficient memory
395	**1**	D	fcv	insufficient memory
401	**1**	D	memsetup:	cannot allocate any memory
402	**1**	D	wwopen:	insufficient memory to open window
411	**4**	D	malint:	pointer was previously defined
412	**1**	D	malint:	cannot allocate sufficient mem
413	**4**	D	mfrint:	pointer not defined

No.	Action	Programs	Source	Description
414	**4**	D	mfrint:	error freeing memory
416	**4**	D	malrel:	pointer was previously defined
417	**1**	D	malrel:	cannot allocate sufficient mem
418	**4**	D	mfrrel:	pointer not defined
419	**4**	D	mfrrel:	error freeing memory
420	**4**	D	dumchkgr:	dummy graphics check in gr mode
430	**4**	D	swapres:	item pointer error
451	**1**	D	edbins:	insufficient memory
452	**1**	D	edtfed:	insufficient memory
453	**1**	D	edtmlk:	insufficient memory
454	**1**	D	edhard:	insufficient memory
455	**1**	D	edtime:	insufficient memory
461	**1**	D	grouprep:	insufficient memory
472	**4**	D	edtfedar:	incorrect number of pointers
473	**4**	D	edtmlkar:	incorrect number of pointers
501*	**4**	D*	mlkfp:	negative number of days
601	**3**	D	cowload:	read error from cow file
602	**3**	D	cowsave:	write error in cow file
603*	**3**	D*	savecid:	write error saving cowid in file
604	**4**	D	cowload:	record number range error
605	**3**	D	cowload:	seek error in cow file
606	**4**	D	cowsave:	record number range error
607	**3**	D	cowsave:	seek error in cow file
608	**4**	D	cowsave:	record number mismatch
609	**1**	D	cowload:	out of memory
610	**4**	D	cowdisk	incorrect substructure count
611	**4**	D	cowdisk	attempt to write cow, not allowed
612	**4**	D	cowdisk	function pointer NULL
613	**5**	D	cowgsiz	incorrect cow structure size
651	**4**	D	cowgmem:	null cow pointer
652	**1**	D	cowgmem:	insufficient memory for cow ptr
653	**1**	D	cowgmem:	too many cow pointers
661	**4**	D	cowmchk:	null cow pointer
662	**4**	D	cowmchk:	null cow->gen pointer
663	**4**	D	cowmchk:	safety variable error
664	**4**	D	cowmchk:	record size error
671	**1**	D	cowrmem:	pointer count error
681	**4**	D	cowsask:	null pointer
682	**2**	D	dpmain	error chaining to DPSIZE program
701*	**1**	D*	cownotes:	error allocating memory
703*	**1**	D*	cownotes:	error allocating filler memory
711*	**6**	D*	cownotes:	error reading file header
712*	**6**	D*	cownotes:	range error in file header
721*	**3**	D*	cownotes:	read error
731	**6**	D	cownotes:	error filling file
732	**3**	D	cownotes:	error writing to file
733	**6**	D	cownotes:	error writing file header
741	**4**	D	edfmth:	assignment to Null pointer
751	**4**	D	edcamlk	incorrect index array (possibly DPSIZE)
801	**3**	D	bullload:	read error from bull file
802	**6**	D	bullsave:	write error in bull file

No.	Action	Programs	Source	Description
803	**4**	D	bullsave:	file not previously opened
804	**2**	D	bullopen:	data version older than program
805	**2**	D	bullopen:	data version newer than program
806	**4**	D	bullload:	bull ptr not initialized ok
807	**4**	D	bullsave:	attempt to save past file end
808	**4**	D	bullload:	file not opened first
810	**4**	D	bullopen:	bullary pointer not null
811	**1**	D	bullnewr:	insufficient memory
812	**5**	D	siptrs;	incorrect number of pointers
901*	**2**	D*	mbackup:	unrecognized backup drive
951	**4**	D W	StringArray	Allocation Count too high
952	**4**	D W	IntSet	Allocation Count too high
953	**4**	D	mcrgmem	Allocation Count too high
1001	**1**	D	setuprt:	insufficient memory
1002	**1**	D	setuprt:	insufficient mem for resp array
1011	**1**	D	dpscales:	insufficient memory for gate/scale control
1101	**4**	D	scanid;	null pointer
1201	**4**	D W	vetpre;	action number out of range
1202	**4**	D	edcivet;	civary NULL
1203	**1**	D	edcalve;	insufficient memory
1204	**4**	D	vetcheck	incorrect cow number in array
1301	**1**	D	dr1cow;	out of memory
1302	**1**	D	breedgra	out of memory
1303	**1**	D	vetgraph	out of memory
1304	**1**	D	duegraph	out of memory
1305	**1**	D	dr1indiv	out of memory
1311	**1**	D	dr1group	out of memory
1351	**1**	D	gqprint	out of memory
1352	**1**	D	dpgraphs	out of memory
1401	**1**	D	edcamlk	out of memory
1402	**1**	D	stitpush	out of memory
1403	**1**	D	ucopdel	out of memory
1404	**1**	D	dpimport	out of memory
1405	**1**	D	dpimport	out of memory
1406	**1**	D	mcrepsav	out of memory
1407	**1**	D	mcrptop	out of memory
1408	**1**	D	fastbull	out of memory
1409	**1**	D	edfmth	out of memory
1410	**1**	D	fastgroup	out of memory
1411	**1**	D	replacemess	out of memory
1412	**1**	D	writemessfi	out of memory
1413	**1**	D	edcamlk	out of memory
1414	**1**	D	vetcheck	out of memory
1415	**1**	D	fkereplist	out of memory
1416	**1**	D	fkecow	out of memory
1501	**6**	D	DPNetfun	cannot write to file DPNet.DAT
1502	**7**	D W	DPNetfun	cannot open file DPNet.DAT
1503	**7**	D W	DPNetfun	cannot write share-test region
1504	**6**	D	DPNetfun	cannot write to file DPNet.DAT
1505	**6**	D W	DPNetfun	cannot write to file DPNet.DAT
1506	**6**	D W	DPNetfun	cannot write to file DPNet.DAT

No.	Action	Programs	Source	Description
1507	**6**	D W	DPNetfun	cannot write to file DPNet.DAT
1508	**6**	D W	DPNetfun	cannot write to file DPNet.DAT
1509	**6**	D W	DPNetfun	cannot write to file DPNet.DAT
1510	**6**	W	DPNetFile	UpdateRam: illegal nesting
1601	**8**	W	DPDataFile	OpenMemoryMappedFile, physical file error
1602	**8**	W	DPDataFile	OpenMemoryMappedFile, mapped object
2001	**4**	D W	prc	control system already activated
2002	**4**	D W	prc	illegal reactivation
2003	**2**	D W	prc	too many channels
2004	**5**	D W	prc	channel object integrity error
2005	**5**	D W	prc	control system integrity error
2006	**5**	D W	prc	control system integrity error
2007	**5**	D W	prc	control system integrity error
2008	**5**	D W	prc	control system integrity error
2009	**5**	D W	prc	control system integrity error
2010	**5**	D W	prc	channel object integrity error
2011	**5**	D W	prc	control system integrity error
2012	**5**	D W	prc	control system integrity error
2013	**5**	D W	prc	control system integrity error
2014	**5**	D W	prc	control system integrity error
2015	**5**	D W	prc	peripheral object integrity error
2016	**5**	D W	prc	peripheral object integrity error
2017	**5**	D W	prc	peripheral object integrity error
2018	**5**	D5 W	prc	Conductivity table is NULL
2201	**5**	D W	prc	side controller integrity error
2202	**5**	D W	prc	side controller integrity error
2203	**5**	D W	prc	side controller integrity error
2204	**5**	D W	prc	side controller integrity error
2205 – 2249	**1**	D W	prc	Memory Check prc files
2251	**5**	W	Prc	Side controller, attempt to use dummy object
2301	**1**	D W	TarHG	GroupTable::ResetPrepare memory error
2302	**1**	D W	TarHG	GroupTable::ResetFinalize memory error
2303	**1**	D W	TarHG	TarHerdGroupCorrectionTable::CheckForUpdate memory error
2304	**1**	D W	TarHG	TarHerdGroupCorrectionTable::ResetPrepare memory error
2305	**4**	D W	TarHG	Factor table not initialized (null)
2401-2428	**1**	W	ADIS_Engine	Memory checks, DPData and ADIS_Engine files

What to do in the event of errors

Carry out the following procedures if DairyPlan 5 has shown the ”internal error number X has occurred” error message. See table in this section.

	Action
1	Rare problem that is not serious. DairyPlan did not have enough memory. You should restart.
2	Installation error. Perform a data backup and install the latest update or installation CD again with the current system
3	Physical problem in the data files - maybe due to the PC crashing, power failure or shaking. Make a backup (DPBackup) on an external medium. Use DPDataTest and DPDataConfig on the data record until, as far as possible, no more error messages appear. Individual animal data may be lost. Make another backup after the repair. Check the PC’s hard disk with Scandisk.
4	Internal program fault in DairyPlan. Check data record with DPDataTest and DPDataConfig. If there is no improvement, please note which function led to the crash and report it to GEA Farm Technologies GmbH customer service. Restart DairyPlan.
5	Serious program fault in DairyPlan. Please proceed as described in 4.
6	Hard disk fault or hard disk full. Please try data repair with DPDataTest or DPDataConfig. Delete any superfluous files. Restart DairyPlan.
7	Problem connected with data access by several programs at the same time. End all programs, restart all computers (the whole network if necessary) and restart DairyPlan. If the problem persists, delete the file DPNet.dat” from the DairyPlan folder (this is a temporary file created when the program is started). The file can only be deleted when there are no DairyPlan programs running. Temporary files can be deleted with DPDataTest (click on the ”sticking plaster” icon).
8	Problems with the mmp files (”Memory Mapped Files”), that the DairyPlan program data management memory works with. Close all DairyPlan programs and delete the files ending with ”*.mmp” in the DairyPlan directory. Can also be deleted with DPDataTest (click on the ”sticking plaster” icon).
9	Problems saving data for data codes such as those used, for example, for DPEditData worksheets. Check the settings and data codes for the work sheet. Check animal data with DPDataTest and DPDataConfig until no more errors are reported.

ADIS Engine error codes

No	Source	Message Text		Error / Comment
2501	ADIS_Engine:: ProcessFileSection	Line Status Fault	Interprets XF line (except comment CF)	
2502		Unknown Line Status	Second char unknown	
2503		Unknown control record	First Char unknown	
2504		Record must be alphanumeric	First char not alphanumeric	
2505		Invalid DII Header Record	Wrong length for DII header	
2506		Error Including File	Cannot include file of „IN“ line	C
2507		Error Request without definition	Request line without valid definition	C
2508	ADIS_Engine:: ProcessValueLine	Data Value line without definition	Value line without valid definition (Event number not matching?)	
2509		Status of Value line does not match definition line status		
2510		Warning: No Index Field or no Import Fields	Cannot import because of missing index or no importable field defined	
2511		Value Line, Data record incorrect size	Wrong length of value line according to its definition	
2512		Cannot add sub index (unknown vet action?)	Sub Index Field cannot be imported/added, e.g. because it is an unknown vet action but main index „cow“ is valid	
2513		Cannot Find Index (Cow?) - or Data Set Full?	Main Index field (Cow, Bull, Meter,...) cannot be imported, maybe invalid value or data set is full (capacity reached)	
2514		Cannot Prepare Indexes to Put Data	Something wrong with the composition of value and index fields	
2515		Cannot Save Data	Writing Data to DP Database failed (Access denied?)	
2516	ADIS_Engine:: ProcessAbort	Error Returning from Include File	Recursive File Includes do not return correctly to higher level	C
2517	ADIS_Engine:: ProcessDefinitionRecord	Warning: Import of Manufacturer Specific Events denied	Import of Manufacturer Specific Events (0 < Eventnumber < 6 digits) can be denied	
2518	ADIS_Engine::ProcessSearchRecord	Invalid Search Record	Invalid Search Record („SN“ for ADIS)	
2519	ADIS_Engine::ProcessSortRecord	Invalid Sort Record	Sort Record Wrong (only RFA files)	
2520	ADIS_Engine:: ProcessWestfaliaRecord	ADIS File Wants Version xx or Higher	Version Check Failed (Westfalia Manufacturer Specific Command)	C
2521		Processing Westfalia Record, DELNOTCH no longer supported since DP5.0		

No	Source	Message Text		Error / Comment
2522		Processing Westfalia Record, UNLINK not implemented		
2523		Processing Westfalia Record, DECIMAL no longer supported since DP5.0		
2524		Processing Westfalia Record, DEFREC no longer supported since DP5.0		
2525		Processing Westfalia Record, UNREC no longer supported since DP5.0		
2526		Processing Westfalia Record, REPEAT no longer supported since DP5.0		
2527		Error processing Westfalia Record	Any other error with Westfalia record	
2528	ADIS_Engine:: ProcessFlagRecord	Error processing Control Flag Record, Option xx	Unknown Option in Control record	
2529		Error processing Control Flag Record, Option xx=0/1 unknown	Unknown Flag Mnemonic	
2530	ADIS_Engine:: ProcessExecuteRecord	Execute Records no longer supported since DP5.0		
2531	ADIS_Engine:: ProcessCreateField	DPD#2531 Cannot create fields with DDNumber <= 9999	These numbers <= 9999 are needed for internal DP numberings	C
2532		Cannot create new field	Somehow the CREATE failed	C
2533	ADIS_Engine:: MasterFieldListDiagnostics	Master Field list contains xx Fields plus yy Substitutions	Count the different types of fields defined (only in diagnostic mode)	C
2534		Error: Duplicate DDNumber xx	same field number defined twice (only in diagnostic mode)	C
2535		Error: Duplicate Mnemonic yy	Same Mnemonic defined twice (only in diagnostic mode)	C
2536		Warning: Unknown IndexDD xx for code yy	Something wrong with field definitions and mapping to codes or formulas (only in diagnostic mode)	C
2537		Warning: Unknown ParentDD xx for code yy	Something wrong with the field definition and subindex ordering (only in diagnostic mode)	C
2538		Warning: Duplicate Sub DDNumber xx	Something wrong in field definition with Sub-Index field numbers (only in diagnostic mode)	C
2539		Warning: Duplicate Sub Mnemonic xx	Something wrong in field definition with Sub-Index field Mnemonics (only in diagnostic mode)	C

No	Source	Message Text		Error / Comment
2540		Warning: Sub replaces original xx and/or yy	A Substitution overwrites another field (only in diagnostic mode)	C
2541		Warning: Indirect Substitution for xx	The substitution field itself maps to a substitution (only in diagnostic mode)	C
2542		Error: Cannot Resolve Substitution for xx	The substitution does not map to a valid field (only in diagnostic mode)	C
2543	ADIS_Engine:: GetBuffer	Checksum Incorrect	(only for DII)	
2544	ADIS_Engine:: CreateHeader	This header was created by DairyPlan	Header not specified by Request file	C
2545	ADIS_Engine:: ErrorMessage	Error reading file xx, line y	May precede an error message	C
2546	ADIS_UserWin:: UpdateProgressDialog	User Break	Shown when user interrupts the progress dialog	
2547	DP_ADIS_Engine::Process WestfaliaDelete	Error attempting to delete cow number xx	Cannot delete the given cow	C
2590	CDPDataExchangeApp::O urProcessShellCommand	Auto Mode impossible without Input File	-A option set but no input file given (nothing to process)	MessageB ox
2591		Input File does not Exist	Given fiel does not exist, even with „.ads“ extension added	MessageB ox
2592	GStringArray::ToControlMa x32	CN .... DPD#2592 Additional Lines not Shown	The input was longer than 32KB and therefore was not displayed	

DPNetInstall Errors (2700 – 2799)

☞ **Note!**
Available in online help (press F1).

DPRequest Errors (2800 – 2899)

No	Source	Message Text	
2800	CDPRequestDlg::ExportData ()	Internal Error DPR#2800 DPRequestDlg::ExportData (): TmpRequestFile Name empty	The request file modified for this request is stored in a temporary file with a certain name. This name is lost due to a programming error. Install system again and restart
2801	CDPRequestDlg:: ExportRFARequestData ()	Internal Error DPR#2801 DPRequestDlg:: ExportRFARequestData ():TmpRequestFile '%s' empty or invalid	The request report definition file modified for this request is stored in a temporary file. This file is empty or does not contain a valid report definition
2802	CDPRequestDlg:: ExportRFARequestData ()	Internal Error DPR#2802 DPRequestDlg:: ExportRFARequestData ():ADISEngine not found	Problems with DP database connection. Shut the DPRequest application and start again
2803	CDPRequestDlg::ExportADISRequestData	Internal Error DPR#2803 CDPRequestDlg:: ExportADISRequestData (): ADISEngine not found	Problems with DP database connection. Shut the DPRequest application and start again
2804	CDPRequestDlg::ExportADISRequestData	Internal Error DPR#2804 CDPRequestDlg::ExportADISRequestData ():temporary request file %s not found or invalid	The request ADIS file modified for this request is stored in a temporary file. This file is empty or does not contain valid ADIS request data
2805	CDPRequestDlg::ExportADISRequestData	Internal Error DPR#2805 CDPRequestDlg::ExportADISRequestData ():No data could be created?	No data produced by processing the ADIS request file. Maybe the file is not a request?

15.8 Multi-Port Connection Set

Malfunction	Cause	Remedy
No data connection	Incorrect settings in DPSetup	Check settings
	Multi-Port card driver not installed	Install and check driver
	Multi-Port card not fitted correctly	Check installation
	Multi-Port card defective	Replace card
	Data cable not connected correctly	Check data cable
	Data cable defective	Replace data cable
	No power supply to the CL transformer	Check plug-in power pack
	CL transformer defective	Replace CL transformer
No data connection to COM3 and COM4 (7162-9047-160)	Problem initialising DPProcessControl	Update to DairyPlan Version 5.018 or higher
Possible conflicts with internal Windows processes.	Problem initialising DPProcessControl	Increase COM port numbers or use higher port number for DairyPlan communication.
No data connection when using an AVM-Fritzcard (Win 98SE/NT 4.0 - 7162-9047-160)	AVM-Fritzcard uses internal COM4	Free COM4 (DPSetup) or use card 7162-9047-170 (installation in Win98 from COM5).
	Conflict with another card	Install card in another slot.
COM ports of several cards are not in the correct order.	Cards have not been installed one after the other	Uninstall all ports, uninstall Multiport cards and then insert individually one after the other and install drivers. Re-start Windows between each installation.

15.9 DPNet PCI/USB Interface

Malfunction	Cause	Remedy
No data connection	Incorrect settings in DPSetup	Check settings and adjust if necessary
	Driver for DPNet interface not installed	Install and check driver
	DPNet interface not installed correctly	Check installation
	DPNet interface defective	Replace interface
	Data cable not connected correctly	Check data cable
	Data cable defective	Replace data cable
	Conflict with another interface	Install interface in another slot.

16 Maintenance

Make regular backups on different media!

If necessary, please contact your nearest authorised technical dealer.

16.1 Special personnel qualification required for maintenance work

Maintenance work may only be performed by specially qualified personnel in accordance with the safety instructions.

Also see the section on ”Personnel qualification”.

16.2 Safety instructions for maintenance

To prevent damage to property and/or life-threatening injury to personnel always observe the following:

- Only use original replacement parts / original accessories.
  It cannot be guaranteed that parts from other manufacturers that have not been authorized by GEA Farm Technologies GmbH have been designed and manufactured correctly from the point of view of safety and the stresses encountered.

Also read the chapter on ”Safety”.

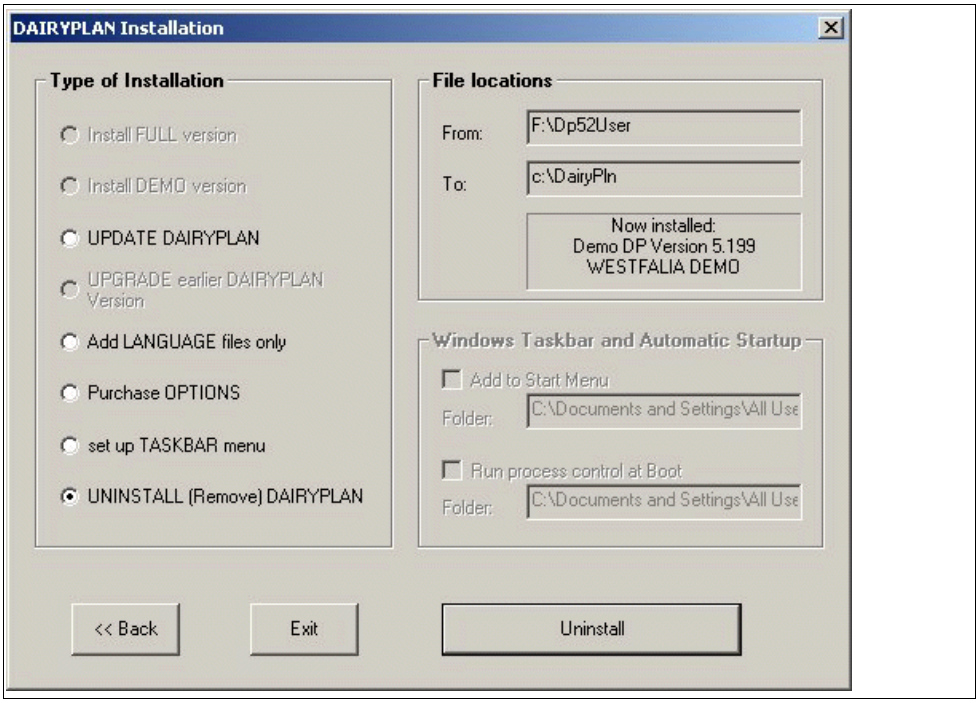
17 Deinstallation

De-installation is performed with the program ”DPUninstall”. This can either be via the input dialogue on the DairyPlan CD, or via the Windows task bar.

Attention!
DPUninstall irrevocably deletes the whole stock of data (program files, lists, analyses, worksheets, data and the entries in the Windows Registry)!
If necessary, make a backup (with DPBackup) of the data stock.

De-installation using the DairyPlan CD.

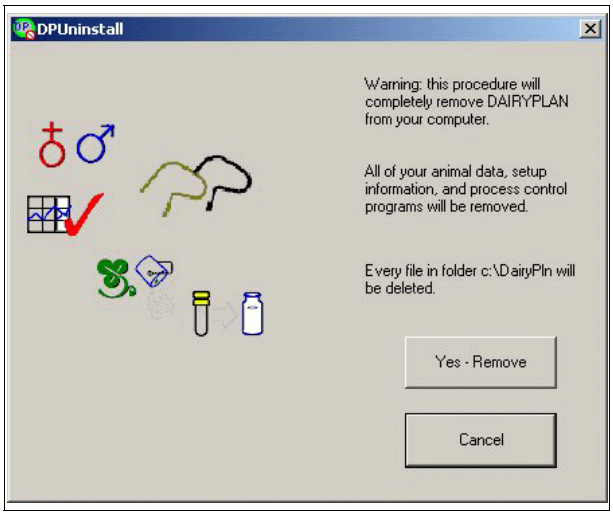
- Insert the DairyPlan CD.
- In the ”DairyPlan Installation” dialogue, select the option ”Uninstall DairyPlan”.



- After running DPUninstall, delete the program file ”DPUninstall.exe” from the DairyPlan directory.

De-installation from the Windows task bar.

- ”Start”, ”Programs”, ”DairyPlan”, ”Uninstall”
- At the warning, confirm that you want to remove DiaryPlan.


DPUninstall
Warning: this procedure will completely remove DAIRYPLAN from your computer.
All of your animal data, setup information, and process control programs will be removed.
Every file in folder c:\DairyPln will be deleted.
Yes - Remove
Cancel

- After running DPUninstall, delete the program file ”DPUninstall.exe” from the DairyPlan directory.

18 Appendix

18.1 Milking control unit settings

Note!
More information on the settings is available from DPSetup online help.

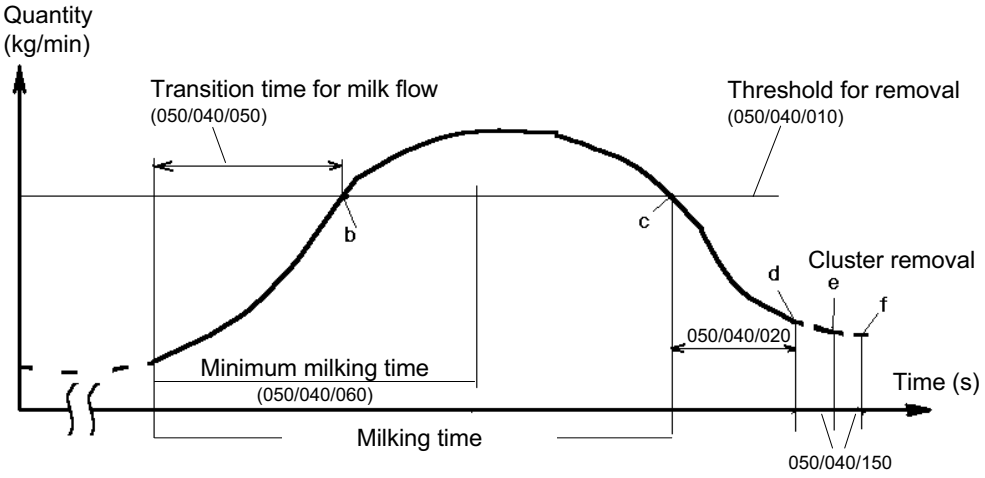
Assignment code

The ”code” from the column of the same name is used:

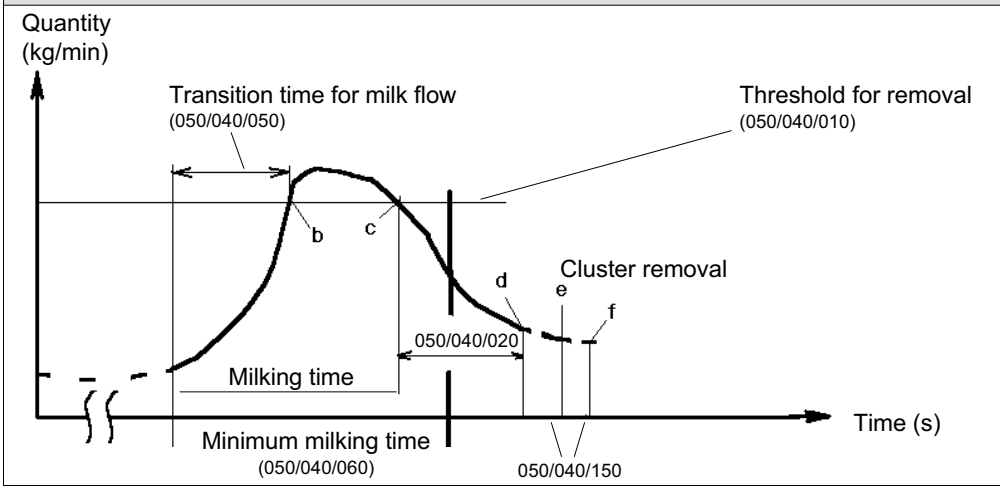
- to assign texts in the user manual to the program or menu
- to assign settings in DPSetup

Examples for a milking sequence

”Normal” milking sequence

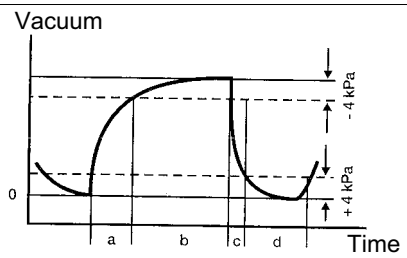


Illogical milking sequence



Code	Function	Default (range)		Setting	Control unit*
Milking					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> Milking 1				
050/040/070	**Minimum milk quantity**	0.200	0.050 – 4000 kg(lbs)		
	The minimum milk yield can be changed so that it is possible to capture low yield animals. The computer will not consider an animal as having been milked if it has not yet yielded the quantity of milk specified here. **Note!** With the measuring procedure using the Metatron measuring reservoir, the lowest value for the minimum quantity is limited to 200 grams (filling volume up to the lower sensor).				
050/040/050	**Transition time for milk flow**	90 (0-240)	seconds Increment: 1 s		
	The bridging time starts at the start of milking. It is during the bridging time that the animal is stimulated, the cluster is applied and the milk flow sets in. At the end of the bridging time, milk flow control will start. • If the milk flow goes above the removal threshold set (b) after the start, the yellow LED will start to flash. • When the milk flow falls below the set removal threshold (c), the LED goes out and the flashing time begins. The factory setting applies to cows. Recommended setting for goats and sheep: 40 s				
050/040/060	**Minimum milking time**	150	30-240 s		
	If, at the end of milking, the milking time is shorter than the minimum milking time the warning message ”illogical milking sequence” is given.				
050/040/010	**Threshold for removal**	0.250	0.050 – 4.000 kg(lbs)/min		
	Milk flow threshold at time of removal.				
050/040/020	**Flashing time**	15 (0-30)	seconds Increment: 1 s		
	Indicates imminent cluster removal for the set time.				
050/040/040	**End of milking time**	10	1-120 s		
	The End of milking time starts when the cluster is removed (the red signal lamps will light up). During the end of milking time, the current milking process can be reactivated by calling up the ”Restart” function. Once the end of milking time has ended (red signal lamps no longer on), the measurement values are released for transmission and the signal is set for the AutoTandem gate controller. The end of milking time is indefinitely extended for • manual operation • Irregularities in the milking process See the ”Alarm” menu (050/080/000) with regard to this.				
050/040/080	**Milking time until removal**	0	0 60 - 1200 sek		
	In addition to cluster removal being controlled by milk flow, as is known, it can also be controlled by time (for the whole herd). If the milk flow threshold is reached before the end of the set milking time, the cluster is removed immediately, otherwise it is removed at the end of the set milking time. • 0 = milk flow controlled cluster removal (default setting) • 60-1200 = time controlled cluster removal (in seconds)				
050/040/110	**Small amount of milk** (DemaTron 70)	0 (0-2)	0 = cows 1 = sheep / goats 2 = parameter 0.1 kg		**DT70**
	With setting 2 at least the quantity 0.1 kg is sent for each animal so that the animal is assessed as having been milked.				
050/040/110	**Small amount of milk** (DemaTron 60)	0 (0-4)	0 = cows 1 = no function 2 = goats 3 = sheep 4 = sheep, special breeds (milking pattern with two peaks)		**DT60**
*	**Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

Code	Function	Default (range)		Setting	Control unit*
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Milking 2**				
050/040/030	**Removal delay**	1 (0,0-6,0)	seconds Increment: 0.1 s		
	Delay in removal is the time between the route taken by the milk being shut off at the cluster and cluster removal (e). In order to enable gentle removal of the cluster, the shut-off valve will be closed at the end of milking (atmosphere above the cluster). The removal valve will follow after a time delay.				
050/040/090	**Delay in application at the start of milking**	0,0 (0,0-6,0)	seconds Increment: 0.1 s		
	The function which delays application at the start of milking delays the release of the route for the milk in order to minimise the vacuum fluctuations in the milking installation during the application phase. **When the default setting is changed it should be noted that the vacuum release changes as well.**				
050/040/130	**Manual removal**	no	yes/no		
	All animals will be milked without automatic removal.				
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Milking 3**				
050/040/150	**Shutting off the route taken by the milk before/after removal**	0 (0-1)	0 = before removal 1 = after removal		
	Is the route taken by the milk to be shut off before or after removal? • Shut off before removal Under normal conditions, the route taken by the milk will be shut off before removal. • Shut off after removal If the cluster is heavy or the vacuum level is poor, the route taken by the milk should be shut off after removal so that the cluster does not fall off at the end of milking.				
	Setting for animals with low milk yield.				
050/040/140	**Maximum milk duration**	no	yes/no		
	Setting 050/040/080, only for animals with active separation function.				
*	**Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

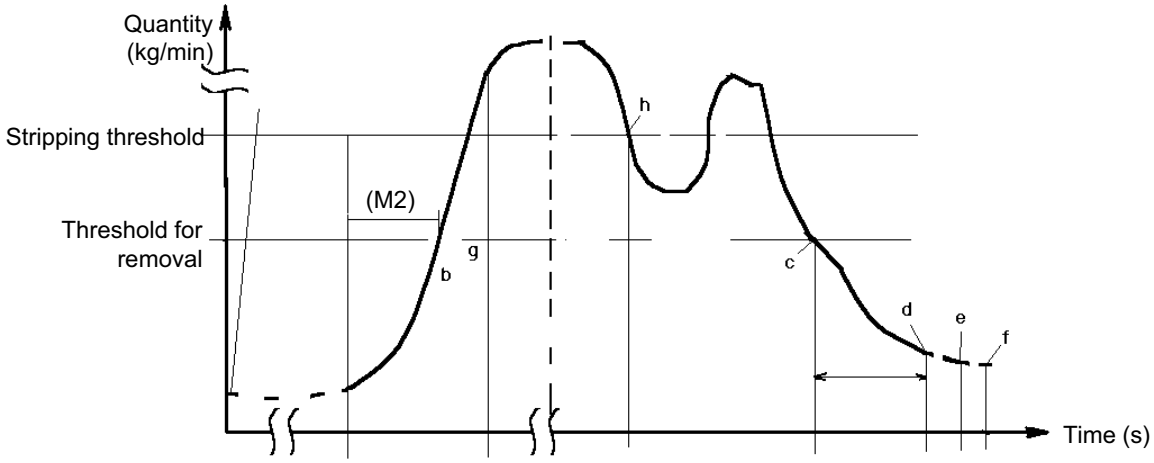
Code	Function	Default (range)		Setting	Control unit*
Pulsation					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Pulsation**				
050/020/010	**Number of pulses**	62 (30-300)	Pulses/min Increment: 1		
	The number of pulses is to be adapted to the cow to be milked. The default setting for cows is 62 pulses/min. Higher pulse rates are normally required when milking sheep and goats. Recommended settings: • goats: 90/min • sheep: 120/150/min				
050/020/020	**Ratio between suction phase (SP) and relaxation phase (RP)**	64:36 (50-70:50-30)	Increment: 1%		
	The fraction for the suction phase (a+b) can be set within a range of 50-70% of the whole phase. The fraction for the relaxation phase (c+d) will change accordingly. Recommended settings for: Goats: 60:40 Sheep: 50:50				
050/020/080	**Delay to stimulation start**	0 (0-10s)	0 = off		
	After the start of milking, stimulation can be delayed by the time set here so that it does not start while the cluster is being applied. Milking pulsation is running during the delay time.				
050/020/040	**Pulsation stop in manual mode (manual operation)**	1 (0-1)	0 = without 1 = with		
	In manual mode, you can choose with or without manual pulsation stop at the end of milking. • Without pulsation stop Pulsator will continue to run continuously, automatic removal is switched off. • With pulsation stop Pulsator will stop at the end of milking, automatic removal is switched off. If set to ”with”, milking can be • Continued with the ”Hand” key (restart) • stopped by pressing the ”STOP” key				
050/020/030	**Alternate/simultaneous pulsation**	0 (0 - 1)	0 = asynchronous pulse 1 = synchronous pulse		
	Alternate pulsation: With Alternate pulsation, the milk will be extracted from the left half of the udder within the suction phase while the right half of the udder will be within the relaxation phase during a pulse cycle. Alternate pulsation also functions accordingly in order to separate the front and rear halves of the udder (see P4). A prerequisite for this is a cluster with an air distributor for separating the halves of the udder. Simultaneous pulsation: With simultaneous pulsation, the milk will be extracted from all four quarters of the udder at the same time within the suction phase and in the subsequent relaxation phase all four quarters will be relaxed during a pulse cycle.				
*	**Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

Code	Function	Default (range)		Setting	Control unit*
050/020/090	**Pulsator overrun at the end of milking**	1 (0-1)	0 = End of milking without pulsator overrun, 1 = End of milking with pulsator overrun		
	When the end of milking is reached, the pulsator will overrun for another 5 pulses in order to make it easier for the cluster to be removed from the teats.				
050/020/050	**Stimulation time 1**	1	0		
050/020/060	**Stimulation time 2**	40	1		
050/020/070	**Stimulation time 3**	20	20s – 95s		
	Setting options (050/020/050-050/020/070) Start key assignment (with stimulation time)				
	Assignment of the start keys can be programmed in any way; the following assignments are permitted:	0	no stimulation		
		1	stimulation time for each individual animal or stimulation adjusted automatically depending on lactation, as transferred from the DairyPlan computer, no stimulation if there is no valid animal file present		
		20-95	fixed stimulation time (in seconds)		

*** Setting applicable for control unit specified??**
- no specification = all control units
- DT60 / DT70 = DemaTron 60 / DemaTron 70
- DM55 / DM60 = DeMax 55 / DeMax 60

For guidance on taking measurements on pulsators, please refer to the following manual: 7037-90 . . -033

Code	Function	Default (range)		Setting	Control unit*
Cleaning					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Cleaning**				
050/010/020	**max. fill time**	25	20s - 60s		**DT70**
	Limit for rinse cycle, otherwise forced drainage				
050/010/030	**Flooding time**	15	5-60 s		**DT70**
	After the flooding of the upper electrode, drainage will be delayed				
050/010/040	**Drainage time**	5	5-60 s		**DT70**
	Opening time of the drain valve				
050/040/100	**Lower cluster for rinsing**	no	yes/no		
	To prepare for rinsing at the end of milking, the individual clusters can be lowered for insertion in the cluster receptacle. Once the cluster has been lowered the vacuum remains shut off. This function is called up with the ”Hand” button (alternative to switching directly to the rinsing position). Call up function by pressing the ”Hand” key (for a long time)				
050/040/120	**Central switch to milking**	0 (0-1)	0 = off 1 = on		
	If this function is activated, each row can be switched from Rinse mode to Ready for milking by pressing the Start/Stop key (for a long time).				
050/010/062	**Central switch to rinsing**	0 (0-1)	0 = deactivated 1 = activated		
	This function switches all of the control units in a milking parlour row to ready for rinsing at the end of milking (instead of ready for milking). If this function is activated central switching is performed by pressing the ”Cleaning” key (press ”Hand” for a long time). • milking places that have finished milking switch over immediately. • milking places that are still milking follow automatically after the end of milking time or after any information messages have been acknowledged.				
*	**Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

Code	Function	Default (range)		Setting	Control unit*
Automatic stripping machine					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Automatic stripping unit**				
					
050/050/010	**Stripping function**	1 (0-1)	0 = without 1 = with		
	Work with or without an automatic stripping unit.				
050/050/020	**Stripping threshold**	0,8 (0,5-4,00)	kg/min Increment: 0.05 kg/min		
	If the milk flow falls below the stripping threshold set (h), the automatic stripping unit is automatically switched on and remains active until the end of milking. The threshold value is recorded during milk flow monitoring.				
Special functions					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Milking 3**				
040/000/066	**Retaining rail signal inverted**	0 (0-1)	0 = signal unchanged 1 = signal changed (inverted)		
	If the retaining rail closes instead of opening the signal may be inverted.				
040/000/150	**SwingOver side change stall**	0 (0-2)	0 = manual 1 = automatically at the end of milking 2 = external signal (magnet integrated in the arm)		
	How does side change-over switching take place in a SwingOver milking parlour?				
050/140/010	**Remote start input (IN 1 / IN 2)**	0 (0-3)	0 = deactivated 1 = remote start 2 = EasyStart 3 = Remote start and EasyStart		
	Connection of an optional remote start or EasyStart.				
050/140/020	**Remote start debouncing time**	0,1 (0-1,0)	seconds Increment: 0.01		
	In order to prevent a fault occurring during the start-up of the controller, a debouncing time of 100 ms will be operated for the remote start.				
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Special functions**				
040/000/060	**Function of the Segregation key**	1 (1-2)	1 = change segregation marker 2 = change stimulation time		**DT60** **DT70**
	Allocate a function that will be performed when the key is pressed.				
	*** Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

Code	Function	Default (range)		Setting	Control unit*
KickOff					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **KickOff**				
050/060/010	**Activate KickOff**	off	on/off		
	The ”Release Kick-Off” function must be commissioned by means of this setting.				
050/060/020	**Transition time**	15	5-60 s		
	Kick-Off transition time The time from the start of milking until Kick-Off monitoring is activatedduring which the cluster can be attached.				
050/060/030	**Waiting time**	1.0	0.1–10.0 s		
	Kick-Off wait time The waiting time is used to compensate for short admissions of air which can occur during the pulsation cycle. If the switch signal is applied without interruption during this period, this will be indicated by the flashing of the signal lamps and the ”Kick-Off” LED.				
050/060/040	**Flashing time**	1.0	0,1s – 20,0s		
	Kick-Off flashing time Duration of the Kick-Off fault display until removal. Removal of the cluster and corresponding disconnection of the vacuum only takes place if the signal from the proximity switch is uninterrupted during the wait and flashing times.				
BackFlush					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **BackFlush**				
050/100/010	**Activate ”Save milk”**	off	on/off		
	Activate ”Save milk” function. Residual milk which is still in the milk tube after the cluster has been removed is sucked in the measuring reservoir. To do this the shut-off valve is briefly actuated.				
050/100/030	**Pulsation time for ”Save milk”**	2.0	0.1-10.0 s		
	”Save milk” impulse time Time which is made available for extracting the residual milk (control time for shut-off valve Y8).				
050/100/020	**Time delay for ”Save milk”**	1	1-60 s		
	”Save milk” delay time Time after cluster removal until the ”Save milk” signal is triggered.				
050/100/035	**Save milk when switching over to cleaning**	off (on/off)			
	When the ”Lower cluster for rinsing” function 050/040/100 is activated, the vacuum valve is shutoff. The save milk function (briefly opens the vacuum valve) can also be activated when switching over to cleaning in order to suck out any remaining milk from the milk tube. The save milk time (050/100/020) and the save milk pulse duration (050/100/020) are used in the same way as for milking.				
050/100/040	**Activate ”Lower cluster”**	off	on/off		
	The ”Lower cluster for intermediate rinsing” function (BackFlush) is activated.				
050/100/060	**Duration for ”Lower cluster”**	30	0-999 s		
	Entry of the time during which the cluster is to be lowered.				
*	**Setting applicable for control unit specified??** • no specification = all control units • DT60 / DT70 = DemaTron 60 / DemaTron 70 • DM55 / DM60 = DeMax 55 / DeMax 60				

Code	Function	Default (range)		Setting	Control unit*
Shut-off Extend end of milking time					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Block**				
050/080/010	**Delay time after a warning message**	0	0–999 s		
	If any fault occurs, the End of milking time (signal lamps flash ”red”) will be extended by this time. If irregularities should arise during the milking process (eg if the minimum milking time set (050/040/060) has not been reached), you can block the opening of the AutoTandem box for the period set (0 to 600 seconds) after the end of milking so that the cow can be checked (the red signal lamps will flash quickly). The extended End of milking time can be reset immediately by pressing ”Restart” (Continue milking) or at the end of the normal End of milking time by pressing ”STOP”.				
050/080/040	**Block start of milking if no animal ID**	yes	yes/no		
	When this function is activated the milking process does not begin until an animal has been identified in the stall.				
Block end of milking if... A general block can be placed on the end of milking with the following markers.					
050/080/020	**Low milk yield**	yes	yes/no		
	Quantity of milk is less than the minimum quantity (see also 070/000/020)				
050/080/050	**KickOff**	no	yes/no		
	When the Kick-Off function is triggered before the expected milk quantity has been reached.				
050/080/060	**”KickOff” after the expected milk quantity has been reached**				
	in every case.				
050/080/070	**High conductivity**				
	Block at the end of milking if the current conductivity value is higher than the conductivity value expected (alarm value).				
Delay end of milking for warning messages if ...					
050/080/080	**Low milk yield**	yes	yes/no		
	Quantity of milk is less than the minimum quantity				
050/080/100	**KickOff**	no	yes/no		
	When the Kick-Off function is triggered before the expected milk quantity has been reached.				
050/080/110	**”KickOff” after the expected milk quantity has been reached**				
	in every case.				
050/080/120	**High conductivity**				
	Delay end of milking if the conductivity is high.				
Display					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall Milking Control Unit -> **Display**				
010/000/135	**Warning message display**	0 (0-3)			**DT60** **DT70**
	0 : Alternating display, all warning messages are shown flashing alternately 1 : No warning message display, individual warning messages for each animal are not displayed. Warning messages from the milking sequence (e.g. manual removal, segregation,ATD box locking,..) continue to be displayed. 2 : No function 3 : With high priority, only the warning message with the highest priority is displayed.				
010/000/130	**Alternating display Animal ID / Milk quantity**	3 (0 - 60)			**DT60** **DT70**
	Displays alternate between animal ID and milk quantity. Animal ID and milk quantity are each displayed for the time set.				

*** Setting applicable for control unit specified??**

- no specification = all control units
- DT60 / DT70 = DemaTron 60 / DemaTron 70
- DM55 / DM60 = DeMax 55 / DeMax 60

Code	Function	Default (range)		Setting	Control unit*
External alarm					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Stall setup -> **Special functions**				
Give external alarm if ...					
050/070/040	**No cow number**	no	yes/no		
	Signal output for warning ”no animal no.”				
050/070/060	**Animal marker (heat, conductivity, etc.)**	no	yes/no		
	Signal output with ”Animal information” info display at the start of milking (eg Dry, Separation, Milking ban).				
050/070/020	**Low milk yield**	no	yes/no		
	Signal output for warning ”Milk quantity too low”				
050/070/050	**Kick-Off**	no	yes/no		
	Signal output for warning ”Kick-Off”				
050/070/070	**High conductivity**	no	yes/no		
	Give a signal for ”high conductivity” info display				
Cluster function					
	The following settings in DPSetup under: Devices -> Milking Parlour/Milking Stall Setup -> Parlour setup -> **Technical features**				
050/105/010	**Lower cluster after removal**	off	on/off		
	In side-by-side milking parlours, after milking the cluster often gets in the way by hanging in front of the udder. In order to have better access to the udder, the cluster can be lowered automatically after removal. At the start of the next milking the cluster is raised (for an adjustable time) to make application easier and is then lowered again for application. The lowering function is only activated if the cluster has been removed. If other functions that affect cluster removal control are also being used (e.g. removal delay, BackFlush), the times must be coordinated with each other.				
050/105/020	**Time between removal and lowering**	5	1-60 s		
	Time between removal (cluster raised) and the cluster being lowered. This time can only be adjusted if ”Lower cluster after removal” is activated.				
050/105/030	**Time for raising cluster at the start**	1.5	0.1-10.0 s		
	The duration time of the raising of the cluster after the ”start of milking” until it is lowered again for application. This time can only be adjusted if ”Lower cluster after removal” is activated.				
050/105/040	**Raise cluster at start of milking**	0 (0-2)	0 = current stall 1 = next stall up 2 = next stall down		
	At which stall should the cluster be raised when the Start key is pressed? 0 = only at the current stall 1 = at the current stall and at the stall with the next number up 2 = at the current stall and at the stall with the next number down				
Unit of measurement: kg / lb					
	The following settings in DPSetup under: Herd -> General -> **Unit of measurement**				

*** Setting applicable for control unit specified??**

- no specification = all control units
- DT60 / DT70 = DemaTron 60 / DemaTron 70
- DM55 / DM60 = DeMax 55 / DeMax 60

18.2 DairyPlan information

Finding out the version number

The DP version number should be given in the event of any technical questions.

DairyPlan

- In the DiaryPlan menu, click on the ”S” button (top left).
- Select ”Help-> on DPMenu”.
- The version will be shown

Other DP programs (e.g. DPList, DPTableGraph, DPView)

- In the DiaryPlan menu, click on the ”S” button (top left).
- Call up the corresonding program.
- Select ”Help-> on the program”.

Ending DairyPlan

There are always several ways of ending a DP or Windows program.

- From ”File - Exit” (see also the section on ”DairyPlan Programs / DPProcessControl”).
- From the cross icon on the menu bar. Except for ”DPProcessControl”, because this program can only be closed with ”File - Exit”.
- If all open DairyPlan programs are to be closed again then, one after the other, click on all of the DairyPlan programs in the status bar with the right mouse button. Select ”Close” in the drop-down menu in order to close the application. The exception is ”DPProcessControl” as this can only be ended with ”End File”.
- The key combination ”ALT/Tab” can be used to ”jump” from one Windows application to the next. Hold down the ”ALT” key and jump from one application to the next by pressing the ”Tab” key. A small window with all active programs will appear. Release the ”Tab” key if a DairyPlan program has been selected. End the DairyPlan application as described in the first bullet point.

Creating a shortcut

It is sometimes useful to create a shortcut on the desktop to reports/programs that are frequently used.

- Select file in Explorer.
- Call up the context menu with the right mouse button.
- Select ”Send to”; ”Desktop (create shortcut)”.

Files used by DairyPlan

AscToADS.exe, AscToAds-install.exe, Automatic-Import.exe	Program for converting ASCII text data into importable ADIS data. Must be installed with AscToAds-install.exe before use
CDAutoPlay.exe	Needed on the DairyPlan installation CD for starting up installation
DP_Data.dll, DP_General.dll	DLL files with central DairyPlan functions that are used by all programs
DP_DeviceParameter.dll	DLL file that manages the definition of the configuration interface with DPNet devices
DP4100.exe, DP4200.exe, ... DP5100.exe	Conversion programs that are automatically called up when an upgrade is performed.
DPAlarm.exe	Program for organizing and displaying alarms and messages, may start other actions
DPAutoServer.exe	COM server, exchange data and settings on other programs with DairyPlan
DPBackup.exe	Program for creating and reloading DairyPlan data backups
DPBridgeMonitor.exe	Displays the flow of data between process control and DPNet devices
DPBridgeNTalk.exe	Used by process control for communication with DPNet devices
DPCalfFeeder.exe	Program for exchanging and displaying data with certain F”rster StandAlone automatic feeders
DPDairy.dat	DairyPlan database file (animal and system data)
DPDataConfig.exe	Utility program for arranging and setting DairyPlan data. Is run through automatically whenever process control is started up.
DPDataExchange.exe	Program for exporting and importing ADIS or DII data
DPDataTest.exe	Utility program for testing and repairing DairyPlan data records
DPEditData.exe	Program for viewing and entering data in table form. Works on so-called work sheets the definition of which is stored in ”*.dpe” files.
DPEvents.exe	Program for displaying saved events from process control, the milking routine for example.
DPFeeds.dat	DairyPlan database file (feed calculation settings)
DPFeedTable.exe	Program for feed calculation in DairyPlan
DPHerdStat.exe	Program with herd statistics data
DPHitTransfer.exe	Program for connecting to the DPHit program for sending data to the HIT Register (Germany only)

DPID.dat	DairyPlan database file (for updates)
DPInstall.exe	Installs DairyPlan systems and updates. On the installation CD or included in the Internet update file
DPKartenarten.exe	Program for exchanging data with computer centres (East Germany only)
DPList.exe	Displays analyses and lists defined in the ”*.rfa” files. Specific analyses can also be printed or saved on the hard disk in an extra file.
DPLKV.exe	Program for reading in ADIS milk control results and registering a herd in accordance with DIN 11800 (Germany only)
DpMenue.exe	DairyPlan’s main menu window.
DPMiko.exe	Program for starting various milk control data exchange applications (Germany only
DPMikontroll.exe	Program for milk control data transmission (East Germany only)
DPMobilSetup.exe	Program used for exchanging data with DPMobil (PalmPilot)
DPMsg*.dpm	File with the text entries for a language. The abbreviation for the language in question will appear instead of ”*”
DPNet.dat	Temporary file for organizing simultaneous data access in DairyPlan programs. Can be deleted if there are problems if all DairyPlan programs are closed. Will be regenerated automatically on start-up.
DPNetInstall.exe	Installation and configuration of DPNet devices
DPNotes.dat	DairyPlan database file (notepad data)
DPPeriph.dat	Temporary process control file. It is installed automatically at every start.
DPPort.exe	Test program for Multi-Port and Dual Port card connections
DPProcessControl.exe	Process control program: controls all communication between the installation and DairyPlan
DPProgCoord.exe	Utility program for debugging data access
DPRegConverter.exe	Utility program for processing text data in ear marker numbers, special animal numbers or responders
DPRegToCow.exe	Program with which new animals can be created from ADIS animal data with ear marker numbers.
DPReproGraph.exe	Program giving an overview of the reproduction statistics (history and future events), ”heat circle”
DPRequest.exe	Program with a user interface for data exchange applications
DPScatterGraph.exe	Displays various DairyPlan data series as dot diagrams

DPShiftW.exe	Converts data entries and other data. Shifting date entries should only be used for demo data records!
DPSingle.exe	Program for displaying and editing data on individual animals. Main window gives a rapid overview of the most important data.
DPSires.dat	DairyPlan database file (bull data)
DPSystemView.exe, DPSystemViewServer.exe, DPSystemViewClient.exe	Programs for displaying the installation (particularly Expert tank control and milk meter rinsing report)
DPTableGraph.exe	Displays series of measurement values (except for Expert tank control)
DPVet.exe	Program for entering, editing and deleting vet actions and treatments (medicines)
DPView.exe	Displays information on the milking, feeding or segregation process taking place at that moment. Additional inputs and outputs are possible for milking systems.
DPMeasGraph	Shows a series of measurement values, optimized display for Rescounter 2
FactOrig	This directory contains original files that have been defined by the manufacturer (”Factory Original”) and which should be copied first before any major customized changes are made.
Nodetalk32.dll	DLL file for communication with the DPNet devices
Wordpad.exe	Microsoft © program that must certainly be present if documents are to be displayed
***.adf**	Files with other additional data (are recorded with the backup)
***.ads**	Files containing data in ADIS format
***.cnt**	Contents files for the online help
***.dii**	Files containing data in DII format
***.dpb**	Files with a DairyPlan backup
***.dpe**	Worksheet for DPEditData
***.dpu**	This is where the settings for DPMenue are stored
***.dpx**	This is where the various DairyPlan programs store their settings
***.hdi**	”Header Inclusion Files”, files with additional definitions for ADIS data exchange
***.hlp**	Online help files
***.mmp**	”Memory Mapped Files”, temporary files which DairyPlan uses to organize access to its data
***.rfa**	List definitions for DPList

18.3 Specialist terms

Term	Explanation
AR	AutoRotor rotary milking parlour
ATD	AutoTandem milking parlour
Tree	Structure / arrangement of the network of controllers and devices
DP	”DairyPlan” herd management program
Desktop	Windows desktop
DPNet interface	Interface for the data connection between ”DairyPlan” and the Westfalia peripherals connected
DPNet equipment	Network components (e.g. Metatron 21, Feeding, Box, Gate Control)
FGM	Herringbone milking parlour
Host processor	Additional processor for a DPNet device
ISO reader	Identification module for animal identification system
Neuron processor	Network processor for a DPNet device
Network installation	Addressing in the network
Service Pin / Neuron ID	Unique identification number (48-bit) for a DPNet device
Peripherals	DPNet components
SBS	Side-By-Side milking parlour
Scanning	Address check on the DPNet devices linked to the network
Signal	Command from DPNetInstall to the DPNet device after successful installation
Wizard	Help tool in DairyPlan

18.4 "DairyPlan System Description" form

If you report a problem to the service department, please try to supply the following information as far as possible. This will save time and telephone charges!

DairyPlan 5 installation description Date: _____							
Farm / dealer details							
Farm details			Dealer				
Name / Address: Andrew Brown / Manor Farm 59302 Oelde Grove Road			Name / Address: John Smith / Dairy Systems Cullompton / Devon				
Tel.: 02522 / 1234 Fax: 02522 / 5678			Tel.: 02520 / 1234 Fax: 02520 / 5678				
Details of milking installation							
Milking Installation (type, number)	2x6 FGM						
Milking places (number) and **milking controller** (type) - Find type on Metatron 12 with 93S	12 x Metatron						
Identification (Type - VC3, VC4, DPNet walk-through, ...)	VC 4						
Feed boxes (type, number)	Feed concentrate box	Calf feeder	TWIN Feeder	Calf feeder DPCalfFeeder	MK-Feed		
	2	1					
Other parts controlled by DairyPlan (segregation gate, animal scales, ...)							
PC Equipment Details (information gathered from invoice or despatch note from supplier)							
Processor (type)							
Operating System (tick or enter under "Miscellaneous")	Windows2000	Windows XP	Windows Vista	Miscellaneous			
	X						
Memory (RAM, amount shown on start-up)	256MB						
Networks	-						
Programs running simultaneously with DairyPlan	Word, Internet connection						
Details on DairyPlan:							
Version number of first installation with date:	DP 4.326, November 1995						
last update:	DP 5.020, January 2002						
Number of animal data records:	120						
Installed modules: (mark with a cross)	P-M	P-F	P-S	HM-D	HM-M2	HM-J	HM-SG
	X	X	X	X			
How long have you had the problem? What happened at the same time? (Power cut, changes in the installation...)	since power failed when lightening struck						

Description of problem (use extra sheet of paper if necessary)

DairyPlan 5 installation descriptionDate: _____							
Farm / dealer details							
Farm details			Dealer				
Name / Address:			Name / Address:				
Tel.: Fax:			Tel.: Fax:				
Details of milking installation							
Milking Installation (type, number)							
Milking places (number) and **milking controller** (type) - Find type on Metatron 12 with 93S							
Identification (Type - VC3, VC4, DPNet walk-through, ...)							
Feed boxes (type, number)	Feed concentrate box	Calf feeder	TWIN Feeder	Calf feeder DPCalfFeeder	MK-Feed		
Other parts controlled by DairyPlan (segregation gate, animal scales, ...)							
PC Equipment Details (information gathered from invoice or despatch note from supplier)							
Processor (type)							
Operating System (tick or enter under ”Miscellaneous”)	Windows2000	Windows XP	Windows Vista	Miscellaneous			
Memory (RAM, amount shown on start-up)							
Networks							
Programs running simultaneously with DairyPlan							
Details on DairyPlan:							
Version number of first installation with date:							
last update:							
Number of animal data records:							
Installed modules: (mark with a cross)	P-M	P-F	P-S	HM-D	HM-M2	HM-J	HM-SG
How long have you had the problem? What happened at the same time? (Power cut, changes in the installation...)							

Description of problem (use extra sheet of paper if necessary)

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